

11. EXECUTIVE SUMMARY OF INDEPENDENT MARKET RESEARCH REPORT

(Prepared for inclusion in this Prospectus)



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06 JUN 2008

The Board of Directors
Uzma Berhad
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55200 Kuala Lumpur
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Dear Sirs/Madam,

Independent Assessment of the Oil and Gas Geoscience and Reservoir Engineering Services, and Drilling Services Industry

The following is a summary of the **Independent Assessment of the Oil and Gas Geoscience and Reservoir Engineering Services, and Drilling Services Industry** in Malaysia prepared by Vital Factor Consulting Sdn Bhd for inclusion in the Prospectus of **Uzma Berhad** (herein together with all its subsidiaries will be referred to as Uzma Group or the Group) in relation to its listing on the Second Board of the Bursa Malaysia Securities Berhad.

1 BACKGROUND OF UZMA GROUP

- Uzma Group is primarily engaged in the provision of Oil and Gas Geoscience and Reservoir Engineering Services, Drilling Services, and Project and Operations Services.
- The Oil and Gas Geoscience and Reservoir Engineering, and Drilling Services provided by Uzma Group are primarily to support the Petroleum Sharing Contract (PSC) Operators/Contractors engaged in the Exploration, Development, Appraisal and Production segments of the Oil and Gas Industry. The Group is currently providing its services to Oil and Gas Industry operators in Malaysia and internationally.
- The Oil and Gas Geoscience and Reservoir Engineering, and Drilling Services Industry falls within the supporting services segment of the broader umbrella of the Oil and Gas Industry.
- For the financial year ended 31 December 2007, Uzma Group recorded total revenue of RM128.2 million.



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2 INDUSTRY OVERVIEW

- The Oil and Gas Industry plays a significant role as a major contributor to the growth and development of the Malaysian economy, contributing in terms of domestic production, as a major generator of export earnings, and as a source of feedstock and raw materials for the chemical and petrochemical industries.
- The majority of the Exploration, Appraisal, Development and Production activities of the Oil and Gas Industry in Malaysia is carried out offshore. Historically, activity has been focused in the shallow waters (informally defined as water depth of less than 200 metres) off the East Coast of Peninsular Malaysia, Sabah and Sarawak.
- Deepwater and ultra-deepwater areas are becoming increasingly important, and are expected to drive the future growth and development of the Malaysian Oil and Gas Industry
- The primary exports of the Oil and Gas Industry in Malaysia are crude oil, natural gas, and refined petroleum products. These exports represent a significant proportion of the nation's exports, and are an important source of foreign exchange.

3 STRUCTURE OF THE OIL AND GAS INDUSTRY

3.1 Overall Structure of the Oil and Gas Industry

- The overall structure of the Oil and Gas Industry is depicted as follows:

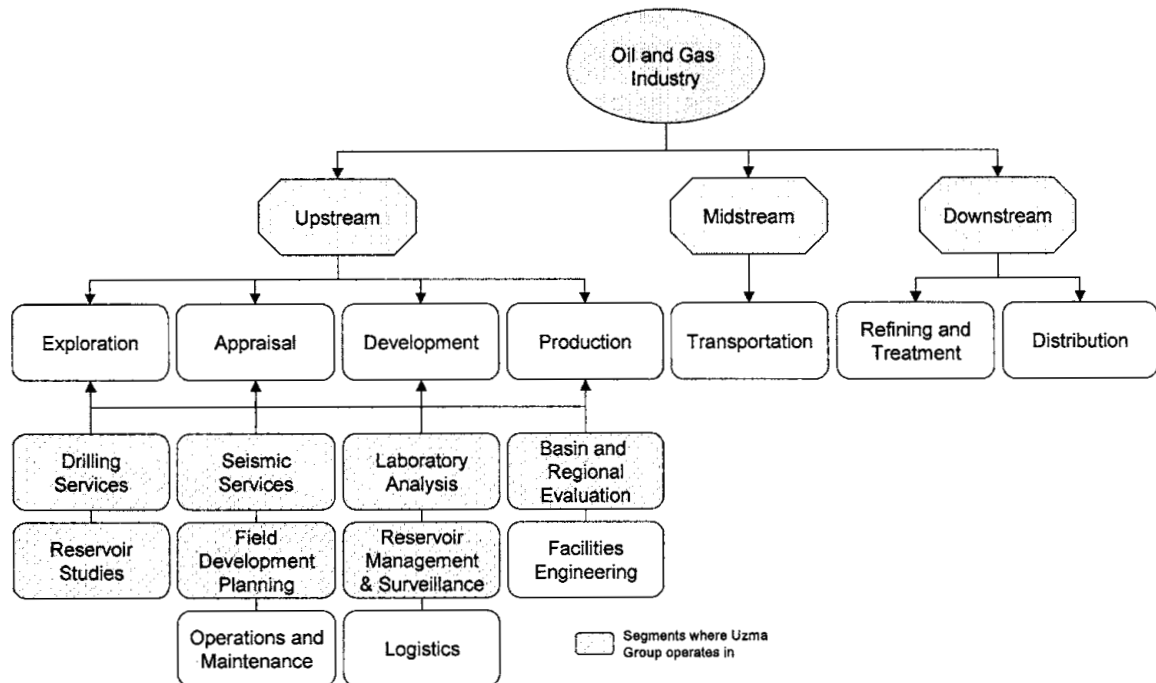


Figure 1 Overall Structure of the Oil and Gas Industry



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- In general, the overall Oil and Gas Industry may be segmented into the Upstream, Midstream and Downstream sectors. The Upstream sector comprises Exploration, Appraisal, Development and Production segments. The Midstream sector comprises Transportation, while the Downstream sector comprises the Refining and Treatment, and Distribution segments.
- Within the Oil and Gas Industry, it is common to segment the Upstream sector to Exploration and Production only, where Appraisal is within Exploration and Development within Production. However, in this report Appraisal and Development are highlighted as part of the Upstream activities because a significant proportion of Uzma Group's business activities are within these two segments.
- **Exploration** primarily involves gaining an understanding of the geological structure of the region and basin, and discovering of hydrocarbon accumulations through the acquisition and analysis of various forms of data, including seismic, core sample, petrophysical and fluid data.
- **Appraisal** comprises activities that are concerned with determining whether or not the discovered hydrocarbon accumulations are economically viable. Appraisal usually involves the acquisition and analysis of additional seismic, core, petrophysical and fluid data.
- **Development** comprises activities that are carried out to bring an untapped economically viable hydrocarbon reserve into production or significantly expanding and existing production facility, including additional data analysis and modelling to gain a better understanding of the reservoir.
- **Production** comprises activities that are related to the extraction of hydrocarbons from identified and developed hydrocarbon reserves. One of the key goals of production is to maximise the extraction of hydrocarbons while minimising costs. Additional appraisal and development activities will also continue.
- **Transportation** comprises the activities related to the transportation of extracted hydrocarbons from production fields to storage facilities and refineries.
- **Refining and Treatment** comprises activities that are related to the processing of extracted hydrocarbons into a form that is utilised by intermediate and final users.
- **Distribution** comprises activities that are related to the transportation and distribution of refined and treated hydrocarbons to end-users. Distribution activities include the operation of tankers, domestic gas networks, and retail outlets such as petrol stations.

3.2 Supporting Activities for the Upstream Sector

- Some of the activities that support the Upstream sector of the Oil and Gas Industry (comprising Exploration, Appraisal, Development and Production segments) include:
 - Drilling Services
 - Seismic Services
 - Basin and Regional Evaluation
 - Field Development Planning
 - Reservoir Studies


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- Reservoir Management and Surveillance
 - Laboratory Analysis
 - Operations and Maintenance
 - Facilities Engineering
 - Logistics.
- Many of these supporting activities are recurring in nature, in that one or more of these activities will be carried out repeatedly during the life of a hydrocarbon reservoir.
 - **Drilling Services** refer to the wide range of services that support drilling activities carried out by the Oil and Gas Industry. The various activities that are included under Drilling Services are included in Section 5.
 - **Seismic Services** involves a set of activities that are carried out to gather, process and analyse seismic data to determine the geological structure of a defined area. Seismic Services are divided into three distinct phases, i.e. Acquisition, Processing and Interpretation.
 - **Basin and Regional Evaluation** are analytical activities carried out by geoscientists to gain an overall understanding of regional petroleum systems and sedimentary basins so that informed decisions can be made with regard to investment in exploration drilling and additional seismic acquisition.
 - **Field Development Planning** is carried out to select and define the best development concept, including reservoir management, facilities design, well design, and operations and management philosophy, before major capital expenditure is committed to produce hydrocarbons from a field. In Malaysia, PETRONAS requires that Field Development Plans be reviewed periodically, and updated every 3 to 5 years.
 - **Reservoir Studies** are carried out by geoscientists and engineers to gain an overall understanding of the hydrocarbon reservoir, and to examine in detail particular aspects of the hydrocarbon reservoir.
 - **Reservoir Management and Surveillance** is required on an on-going basis to manage hydrocarbon reservoirs and individual wells to ensure optimal hydrocarbon production. Reservoir Management and Surveillance typically commences with the building of a dynamic reservoir model using powerful computer hardware and software.
 - **Laboratory Analysis** in the Upstream sector of the Oil and Gas Industry primarily involves the preparation, analysis and storage of core and fluid samples obtained during drilling testing or production. Laboratory Analysis provides geoscientists and engineers with detailed data that they require to carry out Reservoir Studies, and Reservoir Management and Surveillance activities.
 - These supporting activities may be carried out by Second Tier Oil and Gas Industry Companies, or fully be partially outsourced to Third Tier Oil and Gas Industry Companies.
 - Uzma Group is currently engaged in providing the following types of supporting activities to the Upstream sector of the Oil and Gas Industry:
 - Drilling Services



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- Seismic data interpretation (a subset of Seismic Services)
- Basin and Regional Evaluation
- Field Development Planning
- Reservoir Studies
- Reservoir Management and Surveillance
- Providing Laboratory Services and carrying out Laboratory Analysis.

3.3 Exploration

- The main supporting activities that are carried out in the Exploration segment of the Oil and Gas Industry include:

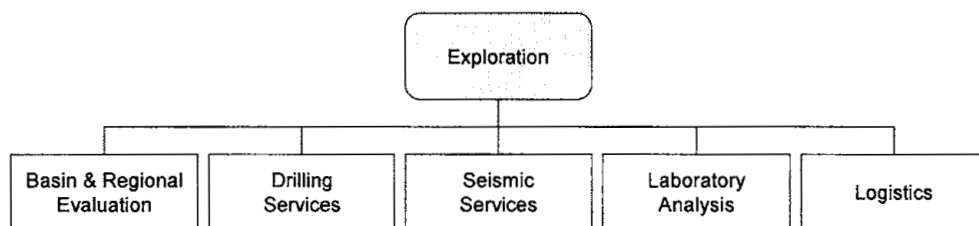


Figure 2 Exploration Segment of the Oil and Gas Industry

- The ultimate aim of Exploration is to gain an understanding of the geological structure of the region and basin, and to discover hydrocarbon accumulations. Exploration involves activities related to the gathering and analysis of data such as seismic data, core samples, and petrophysical and fluid data.
- Uzma Group is involved in the following fields of Exploration:
 - Basin and Regional Evaluation;
 - Drilling Services through planning and managing exploration drilling projects, and wellsite and operational geology services;
 - Seismic data interpretation;
 - Providing Laboratory Services.

3.4 Production

- The main supporting activities that are carried out in the Production segment of the Oil and Gas Industry include:

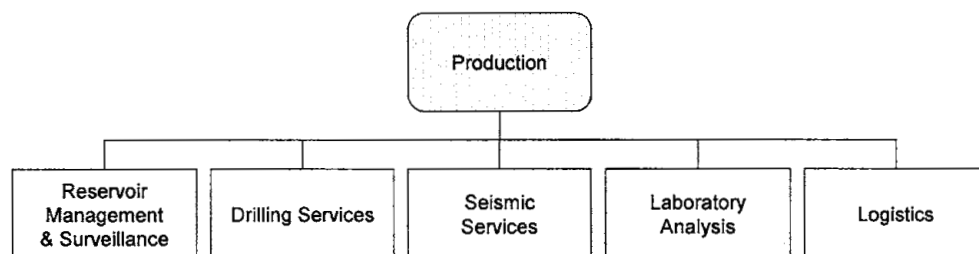


Figure 3 Production Segment of the Oil and Gas Industry

- Production comprises activities are related to the extraction of hydrocarbons from identified and developed hydrocarbon reserves. One of the key goals of production is to maximise the extraction of hydrocarbons while minimising costs.



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- Uzma Group is involved in the following activities related to Production:
 - Reservoir Management;
 - Enhanced Oil Recovery through studies and implementation;
 - Drilling Services through planning and managing drilling projects, and wellsite and operational geology services;
 - Seismic data re-interpretation;
 - Production enhancement studies.

4 GEOSCIENCE AND RESERVOIR ENGINEERING

- In general, Geoscience and Reservoir Engineering is the field of petroleum engineering concerned with finding reserves, characterising the reservoir, and optimising the production of Oil and Gas from reserves. Geoscience and Reservoir Engineering is applied to the Exploration, Appraisal, Development and Production segments of the Oil and Gas Industry.
- Geoscience and Reservoir Engineering encompasses a broad range of activities that support the Exploration, Appraisal, Development and Production segments of the Oil and Gas Industry. The field as a whole may be segmented into those activities related to Primary Recovery and Enhanced Oil Recovery.
- The Geoscience and Reservoir Engineering Services Industry may be segmented into the following:
 - Seismic Services
 - Studies
 - Laboratory and Analytical Services.
- The principal activities in Seismic Services are data acquisition, data processing, and data interpretation. Uzma Group has no involvement in data acquisition. Seismic interpretation is carried out by the Group as an integral part of the Group's Geoscience and Reservoir Engineering Services.
- Geoscience and Reservoir Engineering Service companies carry out a wide range of subsurface studies, some of them broad, but many of them very specialised in nature. Studies form an integral part of the Reservoir Studies, Basin and Regional Studies, Field Development Planning, and Reservoir Management and Surveillance activities in the Upstream sector of the Oil and Gas Industry.
- Uzma Group has the capability to carry a broad range of Geoscience and Reservoir Engineering Service Studies and works with technology partners to provide specialised input and/or software as parts of the Group's studies.
- Drilling Services and production activities acquire vast quantities of reservoir rock and fluids samples. Under Laboratory and Analytical Studies, there are various types of laboratories, including those dealing with core and cuttings, fluids, and speciality services, for example cement, drilling fluids and formation damage.



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DRILLING SERVICES

- In general, Drilling Services refer to the range of services that support exploration drilling, appraisal drilling, development drilling, and other drilling activities carried out by the Oil and Gas Industry. Drilling Services are applied to the Exploration, Development, Appraisal and Production segments of the Oil and Gas Industry.
- Drilling Services are applied together with drilling products such drill bits, tubing, casing, downhole tools, drilling rigs and other supporting equipment to carry out these drilling activities.
- The range of activities that are included under Drilling Services includes:
 - Well Design and Engineering
 - Casing, Cementing and Related Services
 - Drilling Rig Operations
 - Directional Drilling
 - Formation Evaluation While Drilling
 - Mud Logging
 - Lithographic Description.
- **Well Design and Engineering** generally refers to the set of engineering activities intended to efficiently design exploration, appraisal, production and injection wells. Well Design and Engineering activities range from formulating the overall drilling strategy, to designing individual programmes.
- **Casing, Cementing, Drilling Fluids and Other Services** refers to the activities related to drilling and completing the well. Casing is typically installed to achieve a number of goals, including to isolate different zones in the formations from one another, seal off high pressure zones from the surface, or isolate freshwater zones so that they are not contaminated during drilling and completion. Other Services include the supply of drilling and completion fluids, and the provision of completion services and well testing services.
- **Drilling Rig Operations** refer to the activities that are related to the management of drilling rigs.
- **Directional Drilling** refers to the activities that are related to the drilling of wells with deviation from the vertical. Wells are drilled to a location not directly below the drilling unit to optimise reservoir drainage.
- **Formation Evaluation While Drilling (FEWD)** refers to petrophysical measurements acquired while drilling, or shortly thereafter, through the use of tools integrated into the bottomhole assembly. FEWD has the advantage of measuring properties of a formation before drilling fluids invade deeply.
- In **Mud Logging**, data and samples are collected while drilling is on-going to gather useful information about the rock layers that are being penetrated, and to determine if the hydrocarbon reservoir is reached.
- **Lithographic Description** involves analysing the cuttings and core samples recovered during drilling, and preparing a lithographic log over the length of the well.



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- Uzma Group is involved in the following Drilling Services activities:
 - Well Design and Engineering;
 - Lithographic Description;
 - Directional Drilling, through directional planning and supervision of directional drilling operations;
 - Supervision of Formation Evaluation While Drilling operations;
 - Supervision of drilling operations, Mud Logging and other services.

- Uzma Group can undertake the full scope of Drilling Project Management services. The Group's role in Drilling Project Management can be segmented into the following activities:
 - Design and engineering;
 - Operation supervision and management.

6 OPERATORS IN THE UPSTREAM OIL AND GAS INDUSTRY

- The operators in the Exploration, Development, Appraisal and Production segments (commonly referred to as the Upstream sector) of the Oil and Gas Industry in Malaysia may be segmented into several different tiers, depicted as follows:

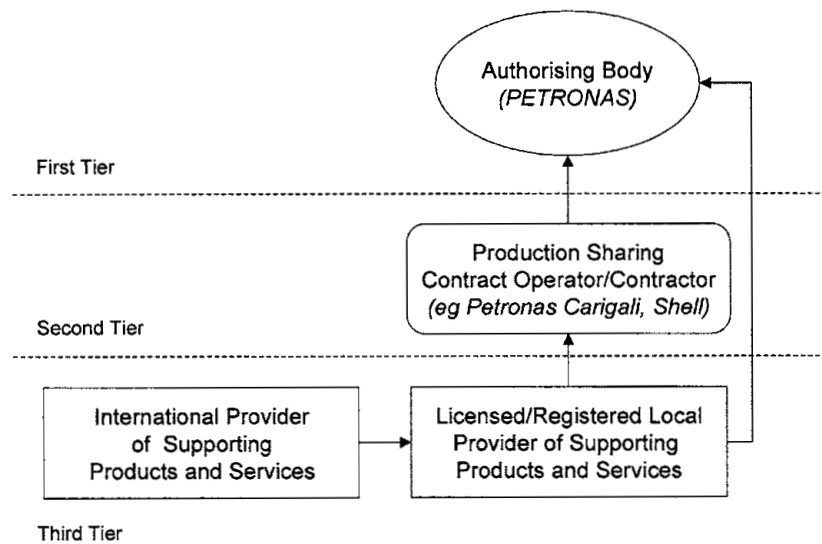


Figure 4 Operators in the Upstream Oil and Gas Industry in Malaysia



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- Operators in the upstream Oil and Gas Industry in Malaysia may be segmented in the following manner:
 - First tier operators, comprising an Authorising Body;
 - Second tier operators, comprising Production Sharing Contract Operators/Contractors;
 - Third tier operators, comprising local and international providers of Supporting Products and Services.

First Tier

- The first tier operator in the Oil and Gas Industry in Malaysia is PETRONAS, the national petroleum corporation. PETRONAS is the Authorising Body for the Oil and Gas Industry in Malaysia. PETRONAS is the primary regulator and licensing body for the Oil and Gas Industry in Malaysia, and is the organization responsible for the industry's long-term development.
- Through its subsidiaries, PETRONAS is involved in a wide range of Oil and Gas Industry activities. PETRONAS is also involved in petrochemical manufacturing and marketing, shipping, automotive engineering, and property investment.
- In addition to operating in Malaysia, PETRONAS is a participant in the international Oil and Gas Industry. As at 31 March 2007, PETRONAS had interests in a total of 58 upstream (exploration and production) ventures in 22 overseas countries.

(Source: PETRONAS)

Second Tier

- The second tier operators in the Oil and Gas Industry in Malaysia are the Production Sharing Contract (PSC) Operators/Contractors.
- PSC Contractors are Oil and Gas companies that have entered into a Production Sharing Contract with PETRONAS. These Oil and Gas companies have the financial and technical ability to bear the cost and risk of undertaking hydrocarbon Exploration, Appraisal, Development and Production.
- The majority of the PSC Contractors currently active in Malaysia are large, multinational Oil and Gas companies. PETRONAS Carigali Sdn Bhd, a wholly owned subsidiary of PETRONAS, is a PSC Contractor.
- In addition to their involvement in the upstream sector of the Oil and Gas Industry, some PSC Contractors are also involved in transportation, refining and distribution.

Third Tier

- Companies in the third tier of the Oil and Gas Industry in Malaysia comprise local and international providers of supporting products and services to PSC Operators/Contractors and PETRONAS.



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- Both local and international providers of supporting products and services are required to obtain the appropriate licence or registration for a particular product or service from PETRONAS before they are allowed to supply first and second tier operators.
- International providers of supporting products and services are usually required to establish partnership arrangements with a Malaysian party before they are allowed to provide supporting products and services to first tier and second tier operators in Malaysia.
- Uzma Group is a PETRONAS licensed company providing Oil and Gas Drilling, Geoscience and Reservoir Engineering Services in Malaysia.

7 GOVERNMENT LEGISLATION, POLICIES AND INCENTIVES

7.1 Government Regulations

- All rights related to the exploration and extraction of petroleum in Malaysia is vested in Petroliam Nasional Berhad (PETRONAS) under the Petroleum Development Act 1974. PETRONAS was also granted control over the carrying out of downstream activities and development relating to petroleum and its products under the Petroleum Development Act 1974.
- All operators wishing to participate in the Oil and Gas Industry are required to obtain the necessary licences, or successfully register with PETRONAS before they are allowed to participate in these activities.

7.2 PETRONAS Licenses and Registrations

- Applicants are required to specify the scope of work for which the licence or registration is being applied for, based on a set of Standardised Work & Equipment Categories (SWEC). An individual licence or registration must be obtained for each SWEC.
- Companies that have obtained a license for a SWEC are allowed to participate in the upstream sector, downstream sector, and maritime sector of the Oil and Gas Industry. In contrast to a licence, companies that are registered in a SWEC are only allowed to participate in the downstream sector and maritime sector of the Oil and Gas Industry. Registered companies are not allowed to participate in the upstream sector or in the offshore sector.
- Generally, licenses and registration are effective for a period of 1 year. However, licenses and registration that are effective for a period of more than 1 year may be considered.

7.3 Registration with the Ministry of Finance

- Uzma Engineering Sdn Bhd, a wholly-owned subsidiary within Uzma Group, is registered as a Bumiputera Contractor with the Ministry of Finance Malaysia. This registration expires on 24 April 2010.



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- Uzma Engineering Sdn Bhd holds the following registrations with the Ministry of Finance:
 - Code number 220501, “Kontrak Buruh”
 - Code number 220502, “Tenaga Pengajar”
 - Code number 220503, “Data Entry/Perisian”.

These registrations expire on 24 April 2010.

7.4 Government Initiatives and Incentives

- As part of the aim to promote and encourage local participation in the Oil and Gas Industry, PETRONAS has implemented the following initiatives:
 - licensing and registration of companies with preference given to local companies;
 - implementation of the Vendor Development Programme (VDP) for Bumiputera entrepreneurs.

7.5 Environmental Regulation

- Uzma Group does not generate any waste that is likely to have a negative impact on the environment during the normal course of the Group’s normal business operations.

8 DEMAND

- Essentially, demand for Oil and Gas Geoscience and Reservoir Engineering, and Drilling Services will come from the local and export market demand of the overall Oil and Gas Industry.

8.1 Exploration Well Drilling

- Between financial years ended 31 March 2003 and 2007, the number of Exploration Wells Drilled increased at an average annual rate of 5.1%. For the financial year ended 31 March 2007, Exploratory Well Drilling activities declined, with the number of Exploration Wells drilled declining by 26.4% with a total of 39 Exploration Wells drilled (*Source: PETRONAS*).

8.2 Production Sharing Contracts

- Between financial years ended 31 March 2001 and 2006, a total of 28 Production Sharing Contracts were signed between PETRONAS and PSC Operators/Contractors.
- The number of Production Sharing Contracts in operation between PETRONAS and PSC Operators/Contractors increased from 41 for the financial year ended 31 March 2002, to a historic high of 60 for the financial year ended 2006.
- Of the 60 PSC in operation, 18 of the PSC in operation are in deepwater areas for the financial year ended 2006. During the financial year ended 31 March 2006, a total of 9 PSC were signed.



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- During the financial year ended 31 March 2007, 4 new PSC were signed, 2 of which were for deepwater blocks (*Source: PETRONAS*).

8.3 Number of Oil and Gas Fields in Operations

- Between financial years ended 31 March 2001 and 2007, the number of Oil and Gas fields in operation in Malaysia increased from 53 to 85. Of the 85 Oil and Gas fields in operation during the financial year ended 31 March 2007, 59 were Oil fields while the remaining 29 were Gas fields (*Source: PETRONAS*).

9 DEMAND DEPENDENCIES

- The demand for Oil and Gas Geoscience and Reservoir Engineering, and Drilling Services will be primarily dependent on the performance of the Oil and Gas Industry in Malaysia.
- The demand for supporting products and services, particularly those related to Exploration, Appraisal, Development and Production, is also dependent on the following factors:
 - The number of recently signed PSC, and the number of PSC in operations;
 - The number of Oil and Gas fields currently in operation in Malaysia;
 - Exploration well drilling activity.
- In addition, the demand for supporting products and services, particularly those related to Exploration, Appraisal, Development and Production, is dependent on the level of investment in Exploration and Production activities made by PETRONAS and PSC Operators/Contractors. This demand dependency is discussed in Section 10.

9.1 Production of Crude Oil and Condensates

- Between the financial years ended 31 March 2003 and 2007, average daily production of Crude Oil and Condensates declined at an annual average growth rate of 1.5%. For the financial year ended 31 March 2007, average daily production of Crude Oil and Condensates declined by 5.4% to 661,000 Barrels of Oil Equivalent (BOE) per day.
- The slight decline in Malaysia's production of crude oil and condensates, and natural gas for the financial year ended 31 March 2006 was due to shutdowns for major maintenance and repair works in several facilities operated by the Petroleum Sharing Contract Operators/Contractors (*Source: PETRONAS*).

9.2 Production of Natural Gas

- The average daily production of Natural Gas declined marginally at an average annual growth rate of 0.2% between the financial years ended 31 March 2003 to 2007. For the financial year ended 31 March 2007, the average daily production of Natural Gas declined by 0.7% to 950,400 BOE per day (*Source: PETRONAS*).



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9.3 Sales Value of Manufacture of Refined Petroleum Products

- Between 2004 and 2007, the sales value of the manufacture of Refined Petroleum Products grew at an average annual growth rate of 20.9%. In 2007, the sales value of the manufacture of Refined Petroleum Products increased by 9.0% to reach RM89.8 billion (*Source: Department of Statistics*).

9.4 Export Value of Petroleum Oils, Crude and Crude Oils Obtained from Bituminous Materials

- Between 2003 and 2007, export value of Petroleum Oils, Crude and Crude Oils obtained from Bituminous Materials grew at an average annual growth rate of 20.5%. In 2007, the export value of Petroleum oils, Crude and Crude Oils obtained from Bituminous Materials increased by 3.0% to reach approximately RM33.5 billion (*Source: Department of Statistics*).

9.5 Export Value of Natural Gas, Whether or not Liquefied

- Between 2003 and 2007, the export value of Natural Gas, whether or not Liquefied grew at an average annual growth rate of approximately 18.4%. In 2007, the export value of Natural Gas, whether or not Liquefied increased by 12.3% to reach approximately RM26.2 billion (*Source: Department of Statistics*).

9.6 Export Value of Petroleum Products, Refined

- Between 2003 and 2007, the export value of Petroleum Products, Refined grew at an average annual growth rate of 24.0%. In 2007, the export value of Petroleum Products, Refined increased by 3.2% to reach approximately RM19.8 billion (*Source: Department of Statistics*).

9.7 Implications

- The continuing development of the Oil and Gas Industry through the growth in the export of crude oil, natural gas and refined petroleum products, and investment in Exploration and Production activities will create and stimulate demand for Oil and Gas Geoscience and Reservoir Engineering, and Drilling Services.
- New acreage is constantly being opened up for Exploration and Appraisal and subsequent Development and Production. This is reflected by the number of signed Production Sharing Contracts signed between PETRONAS and various Oil and Gas Industry companies. This would create demand for Exploration and Appraisal activities, and subsequently Development and Production activities if economically viable reserves are found.
- The discovery of marginal reserves could also create opportunities and stimulate demand for specialised Geoscience and Reservoir Engineering services, and specialised Drilling technology to commercialise the production of Oil and Gas from these marginal reserves.
- The continuous growth in the number of Oil and Gas fields in operation over recent years also creates demand for services related to Oil and Gas Production.



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- In addition, there are various Geoscience and Reservoir Engineering techniques used to optimise production. For example, EOR techniques are used to halt the drop in production and maintain maximum profitability. The continuous growth in the production of Oil and Gas from EOR should spur the demand of supporting services including Oil and Gas and Geoscience and Reservoir Engineering, and Drilling Services.

10 SUPPLY

- Uzma Group is principally involved in provision of Oil and Gas Geoscience and Reservoir Engineering, and Drilling Services for the PSC Operators/Contractors within the Exploration, Appraisal, Development and Production segments of the Oil and Gas Industry.
- As there are no direct data and statistics available on Oil and Gas Geoscience and Reservoir Engineering, and Drilling Services, data on investment in Exploration and Production of Oil and Gas, and Offshore Seismic Survey are used as a proxy to provide analysis of the performance of Oil and Gas Geoscience and Reservoir Engineering, and Drilling Services.

10.1 Investment in Exploration and Production of Oil and Gas

- The level of Investment made by PETRONAS and PSC Operators/Contractors in the Exploration and Production of Oil and Gas in Malaysia increased at an average annual rate of 20.6% between the financial years ended 31 March 2003 and 31 March 2007.
- For the financial year ended 31 March 2007, investment in Exploration and Production increased by 19.5% to reach RM19.2 billion (*Source: PETRONAS*).

10.2 Offshore Seismic Survey

- Offshore Seismic Survey activity is measured in terms of the number of line kilometres of seismic data recovered. Between financial years ended 31 March 2003 and 2007, the amount of Offshore Seismic Survey Data Recovered declined at an average annual rate of 8.2%.
- During the financial year ended 31 March 2007, the amount of Offshore Seismic Survey Data Recovered declined by 43.1% to approximately 250,000 line kilometres of 3-Dimensional seismic data (*Source: PETRONAS*).



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10.3 Value of Output of Engineering Consultancy Services

- Between 1994 and 2003, the value of gross output of Engineering Consultancy Services increased at an average annual growth rate of 5.7%. The value of gross output of Engineering Consultancy Services increased from RM1.0 billion in 1994 to approximately RM1.7 billion in 2003.
- In 2003, preliminary data indicates that the value of gross output of Engineering Consultancy Services increased by 15.4% to reach approximately RM1.7 billion, compared to the previous year (*Source: Department of Statistics*)

11 SUPPLY DEPENDENCIES

- Uzma Group is primarily involved in the provision of Oil and Gas Geoscience and Reservoir Engineering, Drilling, and Project and Operations Services for the Oil and Gas Industry. As such, it does not use any raw materials in any significant amount.

12 VULNERABILITY TO AND RELIANCE ON IMPORTS

12.1 Vulnerability to Imports

- Uzma Group is not vulnerable to the threat of imports, as overseas service providers who wish to supply PSC Operators/Contractors in the Exploration, Appraisal, Development and Production, and offshore segments of the Oil and Gas Industry in Malaysia are required to obtain the relevant license from PETRONAS.
- As a result, overseas service providers cannot supply PSC Operators/Contractors in the Exploration, Appraisal, Development and Production, and offshore segments of the Oil and Gas Industry in Malaysia directly.

12.2 Reliance on Imports

- Uzma Group is not reliant on imported raw materials and components as the Group is primarily engaged in the provision of services, and as such the Group's purchases of imported raw materials and components are minor.

13 COMPETITIVE NATURE AND INTENSITY IN MALAYSIA

13.1 Competitive Nature

- In general, the Oil and Gas Geoscience and Reservoir Engineering Services, Drilling Services and Project and Operations Services Industry operate under normal competitive conditions.
- However, there are some conditions as follows:
 - In Malaysia, only service companies that are licensed or registered by PETRONAS are allowed to bid directly for work provided by PETRONAS


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- and Production Sharing Contract (PSC) Operators/Contractors in the Oil and Gas Industry.
- Registration as a contractor with the Ministry of Finance under specified categories is a pre-requirement for PETRONAS licensing or registration under specified Standardised Work and Equipment Categories.
- All service companies who wish to obtain contracts from the Malaysia Government or to bid directly for work provided by PETRONAS and PSC Operators/Contractors in the Oil and Gas Industry in Malaysia are required to register as contractors with the Ministry of Finance (MoF).
- Therefore, although service providers within the Oil and Gas Geoscience and Reservoir Engineering Services, Drilling Services and Project and Operations Services Industry operate under normal competitive conditions, it is imperfect due to the requirements for licensing and registration that partly inhibits free competition.
- As with most free enterprise environments, once all the licensing and registration requirements have been complied with, competition is based on a number of factors, including:
 - Technical compliance to customers' specifications and requirements
 - Geoscience, engineering and technical service capability
 - Availability of qualified geoscientists, engineers and technicians, and other related professionals and technicians
 - Health, Safety and Environment management;
 - Access to technology
 - Cost competitiveness
 - Quality of products and services
 - Prompt delivery and compliance with deadlines.

13.2 Competitive Intensity

- In general, competitive intensity among operators in the Oil and Gas Geoscience and Reservoir Engineering, Drilling, and Project and Operations Services Industry is low to moderate.
- Considerations on competitive intensity are as follows:

Factors that Increase Competitive Intensity

- A large proportion of the contracts are awarded on an open tender basis. This system tends to create a highly competitive environment.
- In practice all-open tender situations, once the technical specifications are fully complied, the contract is awarded to the lowest price bid.
- Large international firms may be involved in the bidding process through their local subsidiaries or partners in situations where large, complex and high value projects are placed on tender.
- In some situations, there are many bidders with the relevant credentials for tender and non-tender jobs.

Factors that Moderate Competitive Intensity

- Competition for contracts within the Oil and Gas Industry in Malaysia is ultimately restricted to service companies with the relevant PETRONAS license or registration. The number of service companies with the relevant



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license or registration to provide a particular service or product may be limited, particularly in the case of more specialised or advanced products and services.

- Some clients may award certain contracts based on closed tender, restricted tender, or a direct negotiation basis. In these instances, competitive intensity is reduced.
- The technical requirements and specifications for some complex projects may be so challenging that only a small number of the more specialised service companies are able to meet the requirements.
- Some service companies may not be able to meet the “similar experience” track record requirement for more specialised projects.
- Clients normally take into consideration non-price factors, such as technological ability and the ability to provide specialised geoscientists, engineers and technicians in awarding more complex and challenging projects.

14 OPERATORS IN THE INDUSTRY

- As at 30 April 2008, providers of Oil and Gas Geoscience and Reservoir Engineering Services operating in Malaysia include the following:
 - Uzma Group
 - Fugro Group
 - GeoMechanics International Inc. (a member of the Baker Hughes Group)
 - Halliburton Group
 - Orogenic Group
 - Rabutec Sdn Bhd
 - RML Reservoir Management Sdn Bhd
 - Schlumberger Group.
- As at 30 April 2008, providers of Oil and Gas Drilling Services operating in Malaysia include the following:
 - Uzma Group
 - GeoMechanics International Inc. (a member of the Baker Hughes Group)
 - Halliburton Group
 - Orogenic Group
 - Rabutec Sdn Bhd
 - Schlumberger Group.

(Source: Primary Market Research undertaken by Vital Factor Consulting Sdn Bhd)

15 BARRIERS TO ENTRY

- The barriers to entry for new entrants wishing to provide Oil and Gas Geoscience and Reservoir Engineering Services, Drilling Services, and Project and Operations Services in Malaysia are **high**.



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15.1 Government Licences, Registration, Regulations and Policies

- The need to obtain government licences and registrations, and to comply with government regulations and policies forms a **high** barrier to entry to the Oil and Gas Industry.
- Under the Petroleum Development Act, 1974 and other related legislation, activities within the Oil and Gas Industry in Malaysia are regulated by PETRONAS. Companies wishing to participate in a particular area of the Oil and Gas Industry are required to either obtain the corresponding license from PETRONAS, or successfully register with PETRONAS as a service or product provider.

15.2 Qualified and Experienced Geoscientists, Engineers and Technicians

- The need to have qualified and experienced geoscientists, engineers and technicians forms a **high** barrier to entry for new entrants wishing to provide Oil and Gas Geoscience and Reservoir Engineering Services, and Drilling Services.
- Geoscientists and engineers with advanced academic degrees are required to provide most types of Oil and Gas Geoscience and Reservoir Engineering Services, and Drilling Services. These geoscientists and engineers typically possess at least an undergraduate degree in a relevant field, with Master's degrees and doctorates being relatively common. The number of geoscientists and engineers with suitable academic qualifications is limited. Technicians with the necessary qualifications, training and experience are required to provide certain types of services such as drilling services.
- A small new entrant may find it difficult to recruit suitable geoscientists, engineers and technicians, as these highly skilled individuals may be more inclined to work for major oil and gas companies or more established competitors. In addition, a new entrant may not have the internalised knowledge required to identify, evaluate and engage geoscientists, engineers and technicians who have the most suitable skills for a particular project.

15.3 Specialised Technology and Knowledge

- The application of specialised technology and knowledge is required to perform many Oil and Gas Geoscience and Reservoir Engineering Services, and Drilling Services, including seismic data processing and interpretation, 3-dimensional geological modelling, computer and laboratory simulation, design and engineering of production facilities, core analysis, Stratigraphy and laboratory analysis.
- The knowledge and technology required to provide Oil and Gas Geoscience and Reservoir Engineering Services, and Drilling Services such as those listed above creates a **high** barrier to entry.
- Service providers also require access to advanced technology, software and powerful computers to carry out complex tasks such as seismic data processing, interpretation and visualisation, stratigraphic modelling, and 3-dimensional reservoir modelling and simulation.



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15.4 Local Knowledge

- Individual regions and basins usually have individual geological characteristics in terms of the type of rocks present, the extent of faulting, stratigraphy and other characteristics. An understanding of local geological characteristics is required to undertake activities such as Basin and Regional Evaluation, Reservoir Studies and Field Development Planning.
- A new entrant without in-house local knowledge that wishes to provide these services will have to acquire local knowledge by hiring geoscientists and engineers with the necessary knowledge and experience, and/or by gaining access to a third-party database.
- Local knowledge of the geological characteristics of a particular area creates a **high** barrier to entry to new entrants wishing to provide the types of services listed above.

15.5 Proven Track Record

- The preference of customers to appoint Oil and Gas Geoscience and Reservoir Engineering Service, Drilling Service, Project and Operations Service providers is predominantly based on a proven track record of successful project implementation. This creates a **high** barrier of entry to new entrants who normally would not have the required track record to win contracts.
- Service providers are typically required to demonstrate proof of “similar experience” at the company level when submitting applications for contracts tendered by PSC Contractors/Operators. A new entrant wishing to submit a bid is at a disadvantage, as they are not able to demonstrate proof of similar experience at a company level.
- In addition, as the demands by the Oil and Gas Industry tend to be critical in nature, a good safety record is also an important factor in securing a contract. For example, Health, Safety and Environment (HSE) Management continues to be a top priority in all PETRONAS’ operations (*Source: PETRONAS*).
- Oil and Gas Project and Operations Services also tend to be for critical functions. As a result, clients are more likely to engage an established service provider with a proven track record, rather than a new entrant. In this respect, established service providers with a proven track record of successfully completing projects and maintaining the required safety standards have a distinct advantage over new entrants.

15.6 Capital Set-up Cost

- The barrier to entry created by capital set-up cost (excluding land and buildings) to new service provider wishing to provide Oil and Gas Geoscience and Reservoir Engineering Services, and Drilling Services are **low**.
- The capital cost of setting-up a basic provider of Oil and Gas Geoscience and Reservoir Engineering Services, and Drilling Services is approximately RM2.0 million (excluding land and buildings). The capital is invested in the required specialised software (RM1.5 million) and computer hardware (RM0.5 million).



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- At this level of investment, the new entrant will be restricted to competing for projects for which it has acquired the suitable software and hardware. As qualified geologists, engineering and technicians are required to provide specialised services, the new entrant's ability to carry out projects will also be dependent on the ability to engage qualified staff, either on a permanent or contract basis.

16 BARRIERS TO EXIT

- Barriers to exit for service providers wishing to exit the market for providing Oil and Gas Geoscience and Reservoir Engineering Services, Drilling Services, and Project and Operations Services and are **low**.
- Service providers wishing to exit the market can sell their stock of computer hardware and software to other providers of Oil and Gas Geoscience and Reservoir Engineering Services, Drilling Services, and Project and Operations Services, or to other users operating in the Oil and Gas industry. Nevertheless, as the capital cost of entry is relatively low, the cost of exit is correspondingly low.

17 INDUSTRY OUTLOOK AND GROWTH FORECAST

17.1 Outlook and Growth Forecast of the Supporting Products and Services for the Oil and Gas Industry

- The outlook for the Oil and Gas Geoscience and Reservoir Engineering, and Drilling Services Industry in Malaysia is **favourable**.
- The outlook for the Oil and Gas Geoscience and Reservoir Engineering, and Drilling Services Industry as a whole is dependent on the outlook of the overall Oil and Gas Industry. As such, the favourable outlook of the Oil and Gas Geoscience and Reservoir Engineering, and Drilling Services Industry in Malaysia is based on the following observations and analyses:

Local Exploration Activity

- Between the financial years ended 31 March 2003 and 31 March 2007, Investment in the Exploration and Production sectors of the Malaysian Oil and Gas Industry by PETRONAS and PSC Operators/Contractors increased at an average annual rate of 20.6%. For the financial year ended 31 March 2007, investment increased by 19.5% to reach RM19.2 billion;
- Between the financial years ended 31 March 2001 and 31 March 2006, a total of 28 Production Sharing Contracts were signed between PETRONAS and PSC Operators/Contractors. For the financial year ended 31 March 2006, 9 PSC were signed and a record 60 PSC were in operation. During the financial year ended 31 March 2007, 4 new PSC were signed, 2 of which were for deepwater blocks;
- Between the financial years ended 31 March 2003 to 2007, Offshore Seismic Survey Data Recovered declined at an average annual rate of 8.2%. In 2007, the amount of Offshore Seismic Survey Data recovered declined by 43.1% to approximately 250,000 line kilometres of 3-Dimensional seismic data.



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- Between the financial years ended 31 March 2001 and 2007, the number of Oil and Gas fields in operation in Malaysia increased from 53 to 85. For the financial year ended 31 March 2007, a total of 85 fields were in operation, of which 59 were Oil fields while the remaining 26 were Gas fields;
- Between the financial years ended 31 March 2003 to 31 March 2007, the number of Exploration Wells Drilled increased at an average annual rate of 5.1%. For the year ended 31 March 2007, the number of Exploration Wells Drilled declined by 26.4% compared to the previous year. A total of 39 Exploration Wells were drilled during the year ended 31 March 2007;

(Source: PETRONAS)

Local Production and Reserves

- Between the financial years ended 31 March 2003 and 2007, average daily production of Crude Oil and Condensates declined at an annual average growth rate of 1.5%. For the financial year ended 31 March 2007, average daily production of Crude Oil and Condensates declined by 5.4% to 661,000 Barrels of Oil Equivalent (BOE) per day;
- As at 1 January 2008, preliminary data indicates that Malaysia's Reserves of Crude Oil (Including Condensates) amounted to 5.35 billion barrels of oil equivalent. If these reserves were extracted at a constant rate, production is estimated to continue for 22 years;
- Between the financial years ended 31 March 2003 and 2007, average daily production of Natural Gas declined marginally at an average annual rate of 0.2%. For the financial year ended 31 March 2007, average daily production of Natural Gas declined by 0.7% to 950,400 BOE per day;
- As at 1 January 2008, preliminary data indicates that Malaysia's Reserves of Natural Gas amounted to 15.33 billion barrels of oil equivalent. At the current daily rate of Natural Gas production, production in Malaysia is projected to continue for 38 years;
- Between 2004 and 2007, the sales value of the manufacture of Refined Petroleum Products grew at an average annual growth rate of 20.9%. In 2007, the sales value of the manufacture of Refined Petroleum Products increased by 9.4% to reach RM89.8 billion.

(Source: PETRONAS, Bank Negara Malaysia and Department of Statistics)

Exports

- Between 2003 and 2007, the export value of Petroleum Oils, Crude, and Crude Oils Obtained From Bituminous Minerals increased at an average annual rate of 20.5%. In 2007, export value increased by 3.0% to reach approximately RM33.5 billion;
- Between 2003 and 2007, the export value of Petroleum Products, Refined increased at an average annual rate of 24.0%. In 2007, export value increased by 3.2% to reach approximately RM19.8 billion;
- Between 2003 and 2007, the export value of Natural Gas, Whether or not Liquefied increased at an average annual rate of 18.4%. In 2007, export value increased by 12.3% to reach approximately RM26.2 billion;

(Source: Department of Statistics)



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Additional Factors

- The Oil and Gas Industry in Malaysia's continuing push into producing from deepwater resources should continue to drive the growth of the Oil and Gas Geoscience and Reservoir Engineering, and Drilling Services Industry. Deepwater exploration, appraisal and development is typically more complex and riskier compared to shallow water development, and often requires a substantial amount of specialised support services. For example, due to the higher risk and cost anticipated, more complete and detailed field reviews may be carried out to maximise recovery and minimise risk.
- The on-going development and improvement of Oil and Gas Industry technology should sustain the growth of the Oil and Gas Geoscience and Reservoir Engineering, and Drilling Services Industry as PSC Operators/Contractors continue to demand these new technologies.
- Activity in the Oil and Gas Industry is likely to continue to grow with the sustained high global market price for hydrocarbons. On 30 April 2008, the spot price of Brent Crude Oil fluctuated around US\$111 per barrel.
- Sustained high price for hydrocarbons is likely to sustain hydrocarbon exploration, development and production activity. Demand for Oil and Gas Geoscience and Reservoir Engineering, and Drilling Services such as seismic data interpretation, full field reviews, field development planning and enhanced oil recovery methods should be sustained by the desire to maximise production from existing oilfields.
- In particular, discovery of new reserves may lead to demand for Geoscience and Reservoir Engineering services such as field reviews, field development planning and enhanced oil recovery methods to maximise production.
- Deepwater production in Malaysia, which commenced in August 2007 when the Kikeh field came on-stream (*Source: PETRONAS*), is expected to help drive development of supporting products and services including Oil and Gas Geoscience and Reservoir Engineering, and Drilling Services in Malaysia. It will also position Malaysia closer to its aspiration to becoming the regional centre for deepwater capability.

18 DRIVERS OF GROWTH

- Some of the drivers of growth for the Oil and Gas Geoscience and Reservoir Engineering, and Drilling Services Industry are as follows:
 - **Market Price of Hydrocarbons Sustained at a High Level**

For the financial year ended 31 March 2007, the average price of West Texas Intermediate (WTI) and Brent crudes increased by 8.5% and 12.2% respectively. The average price of West Texas Intermediate (WTI) and Brent crudes reached US\$64.92 per barrel and US\$65.08 per barrel respectively for the financial year ended 31 March 2007.

The weighted average price of Malaysian Crude Oil (MCO) rose in tandem to US\$68.50 per barrel, an increase of 11.2% for the financial year ended 31 March 2007, over the same period (*Source: PETRONAS*).



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Sustained high market price for hydrocarbons is likely to encourage hydrocarbon producers to maintain production at a high level, or even to increase production by developing new fields, including marginal fields. Efforts to maintain and increase production are likely to spur the demand on the application of supporting products and services such as seismic data processing and interpretation, field reviews and other similar oilfield studies, drilling and completion, design and engineering of various production facilities, and the development and application augmented recovery methods.

- PETRONAS Policy

PETRONAS has a policy of nurturing the development of local Oil and Gas Industry companies, including local providers of supporting products and services such as Oil and Gas Geoscience and Reservoir Engineering and Drilling Services, and others.

As part of the aim to promote and encourage local participation in the Oil and Gas Industry, PETRONAS has implemented the following initiatives:

- . licensing and registration of companies with preference given to local companies;
- . implementation of the Vendor Development Programme (VDP) for Bumiputera entrepreneurs.

In addition, PETRONAS encourages Malaysian operators to participate in the Oil and Gas Industry overseas. Qualified Malaysian Oil and Gas Industry operators are encouraged to support PETRONAS' foreign operations. As at 31 March 2007, PETRONAS had interests of total of 58 upstream ventures in 22 overseas countries. (Source: PETRONAS)

- Technological Advances

Technological advances that enhance production efficiency and optimisation, or enable Production to take place in previously inaccessible areas are likely to increase demand for Supporting Product and Service Providers. Technological advances that contribute to the discovery of new reserves, and to increasing hydrocarbon production in economical viable marginal fields in particular, would generally create opportunities and demand for service providers within the Oil and Gas Geoscience and Reservoir Engineering, and Drilling Services Industry.

- Opening of Acreage for New Exploration

The opening of new blocks of Malaysian territorial waters for exploration, appraisal, development and production will create new demand for supporting products and services, including Oil and Gas Geoscience and Reservoir Engineering, and Drilling Services.

With a large proportion of shallow water acreage (generally with depth of less than 200 metres) already allocated to PSC Operators/Contractors, the opening of new acreage is primarily for deep-water exploration, appraisal, development and production.



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Between 1976, when the current PSC model was initiated, and October 1999, PETRONAS signed a total of 70 Production Sharing Contracts with various Oil and Gas Industry companies. For the financial year ended 31 March 2007, there were four new PSC were signed, two of which were awarded for ultra-deepwater blocks. (Source: PETRONAS)

- Discovery of New Reserves

The discovery of new reserves will stimulate demand for products and services to support Exploration, Appraisal, Development and Production of the new reserve. In 2005, a total of 7 new offshore oilfields were discovered. Of these discoveries, 4 were in Sabah, 2 in Sarawak, and one in Peninsular Malaysia (Source: Bank Negara Malaysia).

For the financial year ended 31 March 2006 (the most recently available data), new oil and gas reserves amounting to 645.3 million barrels of oil equivalent were discovered in Malaysia (Source: PETRONAS). The continuing discovery of new reserves would drive growth of supporting products and services including Oil and Gas Geoscience and Reservoir Engineering, and Drilling Services.

In addition, there are various techniques within Geoscience and Reservoir Engineering to be use for enhancing production. For example, Enhanced Oil Recovery (EOR) techniques can be used to maintain or increase production in mature fields. The discovery of new reserves would also spur the demand of supporting services including Oil and Gas Geoscience and Reservoir Engineering, and Drilling Services.

Demand for the Oil and Gas Geoscience and Reservoir Engineering, and Drilling Services is stimulated by the development of new offshore fields for production. PSC Operators/Contractors may implement field management programmes to maximise production over the life of the oilfield. Enhanced oil recovery techniques may also be carried out.

- Development of Deepwater Resources

According to PETRONAS, for the financial year ended 31 March 2006, nearly 60% of the additions to the nation's Oil and Gas reserves that were made from deepwater areas, while 6 of the 9 new PSC awarded during this period were for ultra-deepwater blocks. Production from deepwater areas commenced in August 2007 when the Kikeh field came on-stream. This is expected to help spur development of Malaysia's Oil and Gas Industry including supporting products and services industries.

(Source: PETRONAS)

Deepwater areas are recognised as the most promising fields of the development of the Oil and Gas Industry in Malaysia. As Exploration, Appraisal, Development and Production activities in these areas are typically more challenging, they are expected to require more support from supporting



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products and services, including Oil and Gas Geoscience and Reservoir Engineering, and Drilling Services.

- Development in Challenging Areas

According to PETRONAS, new reserves are located not only in deeper waters but also in harsher climatic and environmentally sensitive regions, making access more difficult, technologically more demanding and riskier (*Source: PETRONAS*).

As a result, development in these challenging areas are expected to require more complex and challenging supporting services such as specialised and innovative Oil and Gas Geoscience and Reservoir Engineering, and Drilling Services, with an emphasis on implementing or applying new and innovative technologies.

19 AREAS OF GROWTH AND OPPORTUNITIES

19.1 Overseas Operations

- The Malaysian Oil and Gas Industry is large, and has been able to sustain the development of local service providers. To support enhanced current and future growth, it is important that these service providers operate in overseas markets.
- It is also important to venture to new areas to survive beyond the depletion of Malaysia's own hydrocarbon resources, although given the current size of reserves and production rate this is not likely to happen in the near or medium term.
- Service providers within the Oil and Gas Geoscience and Reservoir Engineering, and Drilling Services Industry may gain a foothold in overseas markets by first providing products and services to PETRONAS and its affiliates in its overseas operations.

19.2 Technological Advancement

- The Oil and Gas Industry is driven by technology, and companies are generally willing to adopt new technology. This is particularly true for advances that increase production efficiency, increase extraction rate, decrease cost of production, and/or enable production in previously inaccessible regions.
- Development of technological advance that fits one or more criteria is likely to create an opportunity for service providers that able to provide that technology.

19.3 Sustained High Price of Hydrocarbons

- The expectation that high market price for hydrocarbons can be sustained should encourage development of marginal fields. With the high market price for hydrocarbons, the expected value of the extractable hydrocarbons rises such that the expected return from production becomes economically viable. Development of marginal fields is likely to create an opportunity for service providers that are able to



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provide supporting products and services to enable and enhance production from these fields.

- High hydrocarbon prices could also revive some old wells that still contain some proportion of reserves to be commercially viable for extraction. Service providers may undertake development projects in mature fields to increase production in these areas.

19.4 PETRONAS Field Review Guideline

- PETRONAS has implemented a field management guideline whereby Field Development Plans are to be reviewed periodically and updated every 3 to 5 years. This requirement creates opportunities for providers of Oil and Gas Geoscience and Reservoir Engineering Services that have the capability to provide field review services.
- The application of new technology and techniques to existing data can lead to the discovery of new hydrocarbon reserves in mature fields. This creates additional opportunities for other service providers in the Oil and Gas Industry.
- This requirement creates the potential for repeat business for Uzma Group, particularly for fields for which the Group has already done a field study.

19.5 Redefinition of Blocks

- PETRONAS has the authority to redefine petroleum blocks to encourage Exploration, Appraisal, Development and Production activity.
- In some cases, petroleum blocks allocated to PSC Operators/Contractors are found to be un-economical as a whole after initial Exploration and Appraisal. This may be because discovered hydrocarbon reserves are found to be too scattered or dispersed to allow for economical development of the entire petroleum block.
- PETRONAS has the authority to redefine the petroleum block in question to “carve out” the fields with economical hydrocarbon reserves into one or more new petroleum blocks. This will facilitate the development of these fields, along with associated Oil and Gas Geoscience and Reservoir Engineering, and Drilling Services.

20 THREATS AND RISK ANALYSIS

20.1 Scarcity of Geoscientists, Engineers and Technicians

- The provision of Oil and Gas Geoscience and Reservoir Engineering Services, Drilling Services, and Project and Operations Services is dependent on the application of advanced technology and knowledge, and is highly technical. Qualified geoscientists, engineers and technicians with advanced degrees (usually with a minimum of a bachelor degrees, with master degrees and doctorates common) or qualifications, and industry experience are typically required to carry out complex technical tasks.
- The number of personnel with the required qualifications and experience is small, and competition to acquire their services is usually intense. There is a risk that providers of



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Oil and Gas Geoscience and Reservoir Engineering Services, Drilling Services, and Project and Operations Services will face difficulty in securing qualified personnel.

Mitigating Factors

- Service providers can build a database of qualified geoscientists, engineers and technicians, with detailed information regarding their area of expertise and experience to best match available personnel to tasks and projects. Operators may also build a network of relationships with these geoscientists, engineers and technicians.
- Service providers may engage geoscientists, engineers and technicians on a consultant basis to make up any shortages in in-house skill, which has the added benefit of allowing more flexibility in only engaging geoscientists, engineers and technicians as and when there is a need to do so.

20.2 Sustained Fall in the Market Price of Hydrocarbons

- Hydrocarbons, including crude petroleum and natural gas, are internationally traded commodities whose price fluctuates with the constant interaction between supply and demand for hydrocarbons. Factors such as geopolitical factors and unforeseen supply disruptions may also influence the market price of hydrocarbons.
- Activity in the Oil and Gas Industry is, to some degree, affected by fluctuations in the market price of hydrocarbons:
 - Activity tends to increase during periods of sustained high hydrocarbon prices. This is due to elevated production activity, as well as increased activity to bring reserves into production, and to explore for new hydrocarbon reserves;
 - Activity tends to decline during periods of sustained low hydrocarbon prices. This is due to lower production activity, as well as temporarily reducing or shutting down production from reserves that are no longer commercially viable. Exploration activity tends to continue, however.
- There is a risk that sustained lower price of hydrocarbons will negatively affect activity in the Oil and Gas Industry, leading to lower demand for supporting products and services, including Oil and Gas Geoscience and Reservoir Engineering, and Drilling Services.

Mitigating Factors

- OPEC, a grouping that includes many of the world's largest oil producing nations, has some influence on the price of oil through their control of a sizable proportion of the world's production capacity and reserves. Although the influence of OPEC over the market price of oil is not absolute, OPEC has a vested interest in ensuring that oil prices do not collapse, and as such are likely to actively attempt to sustain oil prices at an 'acceptable' level.



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20.3 Downturn in the Local and Global Economy

- Any prolonged and/or widespread downturn in the global economy is likely to negatively affect the global demand for hydrocarbons, and production of hydrocarbons. This in turn is likely to negatively affect demand for supporting products and services in Malaysia, as activity in the Oil and Gas Industry in Malaysia also slows down.

Mitigating Factors

- A global economic slowdown may not automatically lead to a sustained fall in the market price for hydrocarbons, as the demand for hydrocarbons for power generation and transport tends to be relatively inelastic.
- The Malaysian Government has taken pro-active policies to mitigate the negative impact of global economic downturn in the past, by implementing stimulus packages to boost domestic spending and demand to counter the effect of lower external demand.

20.4 Foreign Exchange Risk

- Fluctuations in foreign exchange rates will have impact on the prices of systems, equipments or chemicals used to facilitate the services.
- This may have an impact on the profitability of service providers within the Oil and Gas Industry. An unfavourable foreign exchange rate movement against the Ringgit may negatively affect a service provider's profitability by increasing its costs or reducing its revenue.
- Many of the systems, components, equipment, raw materials and services used by the Oil and Gas Industry are imported, with the transaction denominated in a foreign currency. In addition, a large proportion of the hydrocarbons produced in Malaysia are ultimately exported, with the transaction denominated in a foreign currency.
- As such, fluctuations in foreign exchange rates will have an impact on the Ringgit price of imported systems, components, equipment, raw materials and services, and on the Ringgit price of exported products.

Mitigating Factors

- On 21 July 2005, the Malaysian Government removed the pegging of the Ringgit to the US Dollar for a managed float system. This system is likely to minimise wide fluctuations in foreign exchange and provide some stability for those business transactions, which are in US Dollars. Bank Negara Malaysia's primary policy objective of promoting the stability of the exchange rate will provide some mitigation against foreign currency risk.
- A company that earns revenue denominated in a foreign currency may mitigate against foreign exchange risk by using its foreign currency earnings to pay for purchases denominated in the same foreign currency. This could provide some natural hedging against foreign exchange fluctuations.



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20.5 Depletion of Hydrocarbon Resources

- All hydrocarbon deposits are non-renewable, in that it is not possible to regenerate hydrocarbons within a reasonable timeframe once they have been extracted. As such, hydrocarbon resources in all hydrocarbon-producing regions, including Malaysia, will eventually be depleted.
- It is likely that demand for supporting products and services, including Oil and Gas Geoscience and Reservoir Engineering, and Drilling Services in Malaysia will end soon after Oil and Gas Industry Exploration, Appraisal, Development and Production activities cease in Malaysia.

Mitigating Factors

- The relatively long period of time before current reserves Crude Oil (including Condensates) and Natural Gas in Malaysia are expected to be completely depleted enables Oil and Gas Industry companies, including providers of Oil and Gas Geoscience and Reservoir Engineering, and Drilling Services to diversify into other industries and/or venture into overseas markets.
- PETRONAS encourages Malaysian service providers to participate in the Oil and Gas Industry overseas. Qualified Malaysian Oil and Gas Industry service providers are encouraged to support PETRONAS' foreign operations. As at 31 March 2007, PETRONAS had interests of total of 58 upstream ventures in 22 overseas countries (Source: PETRONAS).
- As at 1 January 2008, preliminary data indicates that Hydrocarbon Reserves in Malaysia are as follows:
 - Reserves of Crude Oil (Including Condensates) amounted to 5.35 billion BOE;
 - Reserves of Natural Gas amounted to 15.33 billion BOE.
 (Source: PETRONAS)
- At the present rate of Production, Hydrocarbon Reserves in Malaysia are expected to sustain Production as follows:
 - Production of Crude Oil (Including Condensates) for 22 years;
 - Production of Natural Gas for 38 years.
 (Source: Bank Negara Malaysia)
- Between financial years ended 31 March 2002 and 31 March 2006 (the latest available data), a cumulative of approximately 3.4 billion BOE of New Discoveries of Oil and Gas were made in Malaysia by PETRONAS and PSC Operators (Source: PETRONAS).
- The National Depletion Policy introduced in 1980 to safeguard the exploitation of the natural oil reserves by postponing development and control the production of major oil fields (with reserves of 400 million barrels or more) will also ensure that extraction is carefully managed and sustainable over the long term.



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- Current reserve estimates tend to be conservative and may underestimate the actual amount of hydrocarbons that is ultimately extracted, as they do not take into account the following:
 - the existence of currently undiscovered hydrocarbon reserves;
 - technological advances that increases the amount of hydrocarbons that may be commercially extracted from existing reserves;
 - technological advances that enable production from previously inaccessible regions.
- As such, activity in the overall Oil and Gas Industry in Malaysia may very well continue beyond the currently estimated date of complete hydrocarbon reserve depletion.

20.6 Change in PETRONAS Policy

- A fundamental change in PETRONAS policy with regards to regulating the Oil and Gas Industry in Malaysia may come about through the liberalisation of the Oil and Gas Industry.
- PETRONAS may liberalise the Oil and Gas Industry by:
 - Removing licensing requirements for the provision of all supporting products and services;
 - Loosening licensing requirements such that it becomes easier to obtain a license;
 - Allowing foreign suppliers to operate in Malaysia without restrictions and the need to operate with a local partner.
- Liberalising the Oil and Gas Industry in this manner will negatively impact incumbent operators by increasing competition in the industry.

Mitigating Factors

- Currently, despite the restriction of licensing and registration, competition is intense. In the event of any liberalisation, existing service providers would not be significantly worse off as they have been operating in a very competitive environment already.
- On the contrary, the liberalisation of the Oil and Gas Industry may benefit existing service providers, as they may be able to enter new segments of the industry that leverage on their existing strengths and customer base.

21 THREAT OF SUBSTITUTES

- In general, there are currently no practical substitutes to the Oil and Gas Geoscience and Reservoir Engineering Services, and Drilling Services currently provided by Uzma Group. As such, Uzma Group faces no threat from substitutes for the Group's principal business activities.



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22 SUSTAINABILITY

- The sustainability of the overall Oil and Gas Industry, particularly in the Exploration, Appraisal, Development and Production sectors, is dependent on a large degree to the availability of Hydrocarbon Reserves in Malaysian territory. The sustainability of local supporting products and services providers is similarly dependent on a large degree to the availability of Hydrocarbon Reserves in Malaysian territory.
- Hydrocarbon reserves are those quantities of hydrocarbons that are anticipated to be commercially recoverable from known accumulations from a given date forward. Over time, Hydrocarbon Reserves are depleted as hydrocarbons are extracted from hydrocarbon reserves.
- Hydrocarbon Reserves may increase through new discoveries of Oil and Gas reserves that are commercially viable. Reclassification of previously discovered but not commercially viable deposits as Reserves may also occur, leading to an increase in the quantity of Reserves. This may occur through the following:
 - A sustained increase in the market price of hydrocarbons and an upward revision of the forecast future price of hydrocarbons may result in previously discovered but not commercially viable deposits becoming commercially viable. These deposits are then re-classified as reserves;
 - Advances in production technology may lower the cost of extracting hydrocarbons from a particular deposit to a point where Production is commercially viable;
 - Advances in production technology may allow production from previously inaccessible hydrocarbon deposits;
 - The application of enhanced oil recovery techniques such as gas injection, fluid injection, or chemical injection may increase the hydrocarbon recovery rate of a deposit, which may warrant an increase in the level of reserves in that deposit.
- At the present rate of Production, Hydrocarbon Reserves in Malaysia are expected to sustain Production as follows:
 - Production of Crude Oil (Including Condensates) for 22 years;
 - Production of Natural Gas for 38 years.

(Source: Bank Negara Malaysia)
- Statistics on the following factors that are related to the sustainability of the overall Oil and Gas Industry in Malaysia are presented in Section 20.5:
 - Reserves of Crude Oil (Including Condensates) in Malaysia;
 - Reserves of Natural Gas in Malaysia;
 - New Discoveries of Oil and Gas in Malaysia.

23 CRITICAL SUCCESS FACTORS

- The critical success factors for service providers in the Oil and Gas Industry, among many others, including service providers of Oil and Gas Geoscience and Reservoir Engineering, and Drilling Service, are as follows:


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- **PETRONAS Licensing and Registration:** Companies wishing to participate in the Oil and Gas Industry in Malaysia are required to obtain PETRONAS licenses, or to be successfully registered with PETRONAS, as providers of specified products and services. The possession of these licenses or registrations is a fundamental requirement for direct entry and participation.
- **Access to Qualified Geoscientists, Engineers and Technical Personnel:** The provision of Oil and Gas Geoscience and Reservoir Engineering, and Drilling Services is highly technical and dependent on the application of various technologies and technical knowledge, commonly requiring personnel with advanced academic degrees and industry experience. Service providers with an extensive database of qualified geoscientists, engineers and technicians and their area of specialisation will enjoy a distinct advantage over other service providers.
- **Track Record:** The possession of an established track record is a key advantage when securing projects in technically challenging fields within the Oil and Gas Geoscience and Reservoir Engineering, and Drilling Services Industry. As these projects are often critical in nature, PSC Operators/Contractors would commonly prefer to deal with service providers that have proven track record.
- **Multi-Discipline Engineering Capability:** Companies that have multi-discipline engineering capability are able to provide a wider range of engineering services, as well as undertake larger and more complex projects.
- **Health, Safety and Environment (HSE) Concerns:** HSE Management continues to be a top priority in all PETRONAS' operations (Source: PETRONAS). Companies in the Oil and Gas Industry require that their contractors and sub-contractors have a good HSE record. As a company's HSE record is one of the factors considered when evaluating tender submissions, the possession of a good HSE record evidenced by low work-related fatalities, injuries and lost-time incidents is a success factor.
- **Financial Stability:** Companies who are in a healthy financial position are more likely to retain and attract new customers. Potential customers would emphasise financial stability as a key criterion in the evaluation of a prospective service provider as they would not want any disruptions to critical on-going projects. A financially strong provider would be in a better position to upgrade its product and service range, if necessary, to keep abreast with technology. Companies without sufficient cash flow or reserves would run into possible supply disruptions.

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24 MARKET SIZE AND SHARE**24.1 Market Size**

- In 2006, the market size of the Development and Production segments of the Oil and Gas Industry in Malaysia based on Investment made by PETRONAS and PSC Operators/Contractors was estimated at **RM10.3 billion** (Sources: PETRONAS).
- In 2006, the market size of the Exploration segment of the Oil and Gas Industry in Malaysia based on Investment made by PETRONAS and PSC Operators/Contractors was estimated at **RM1.9 billion** (Sources: PETRONAS).

24.2 Market Share

- In 2006, Uzma Group's market share of the Exploration segment of the Oil and Gas Industry in Malaysia based on Investment by PETRONAS and PSC Contractors/Operators is estimated at **5%**.
- In 2006, Uzma Group's market share of the Development and Production segments of the Oil and Gas Industry in Malaysia based on Investment by PETRONAS and PSC Contractors/Operators is estimated at **1%**.

Vital Factor Consulting Sdn Bhd has prepared this report in an independent and objective manner and has taken all reasonable consideration and care to ensure the accuracy and completeness of the report. It is our opinion that the report represents a true and fair assessment of the industry within the limitations of, among others, secondary statistics and information, and primary market research. Our assessment is for the overall industry and may not necessarily reflect the individual performance of any company. We do not take any responsibilities for the decisions or actions of readers of this document. This report should not be taken as a recommendation to buy or not to buy the shares of any company.

Yours sincerely

Wooi Tan
Managing Director
Vital Factor Consulting Sdn Bhd

12. SUMMARY VALUATION REPORT

(Prepared for inclusion in this Prospectus)



Ernst & Young

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SUMMARY VALUATION LETTER

(Prepared for inclusion in the Prospectus)

The Board of Directors
Uzma Berhad
312, 3rd Floor, Block C
Kelana Square
17 Jalan SS 7/26
47301 Petaling Jaya
Selangor Darul Ehsan

6 June 2008

SUMMARY OF THE VALUATION REPORT DATED 21 SEPTEMBER 2007 ON UZMA ENGINEERING SDN BHD, UZMA CONSULTING LTD AND UZMA ENGINEERING PTY LTD ("UZMA GROUP")

Dear Sir:

This letter is prepared for the purpose of inclusion in the Prospectus of Uzma Berhad on the Second Board of Bursa Malaysia Securities Berhad ("Bursa Malaysia").

This letter has been prepared as a summary of our valuation report on the entire equity interest in Uzma Group. Readers are advised to refer to our valuation report dated 21 September 2007 for an overview of the business operations of Uzma Group and its financial performance and, in particular, for the details of the assumptions used, methodology applied and the limitations of the valuation.

Our valuation should not be construed to offer any support or justification for the pricing of Uzma Berhad shares in relation to its proposed listing on Bursa Malaysia as the open market value of Uzma Group as shown in the valuation may not be reflected in the trading price of Uzma Berhad shares for various reasons. In addition, we do not give any assurance nor express any opinion in relation to the performance of the share price of Uzma Berhad upon its listing on Bursa Malaysia.

1. Purpose of the valuation

The purpose of the valuation is to present an indicative range of fair market values of the combined businesses of three (3) entities within Uzma Group in connection with the proposed business combination involving Uzma Group prior to the **proposed initial public offering exercise**. The date of the subject valuation is as at 31 December 2006.



1. Purpose of the valuation (Contd.)

Fair market value is the price at which an entity would change hands between a willing buyer and willing seller, neither being under compulsion to buy or sell and both having reasonable knowledge of all relevant facts as of the applicable valuation date.

The actual price to be transacted may be different from that computed in this indicative valuation and our valuation is not intended to be binding on any party.

2. Scope and limitations

In connection with our engagement, we have held discussions with the representatives of Uzma Group and have relied on the information of Uzma Group provided by them, including the audited financial statements up to 31 December 2006, the relevant historical internal management reports and the financial projections prepared and issued by management and approved by the Board of Directors, in arriving at our opinion. We have assumed that all information provided to us is true, accurate, not misleading and complete in all respects, and the accuracy and reliability of information provided to us are the sole responsibility of Uzma Group. In addition, we have also conducted such other review and analyses on the financial, economic and market criteria deemed appropriate in arriving at our opinion.

Whilst we have considered all information provided to us, we have not carried out the work which constitutes an audit in accordance with the Approved Standards on Auditing in Malaysia.

In rendering our opinion, we have relied on the information provided to us by the Directors of Uzma Group which include the financial forecast and projections, together with the bases and assumptions thereto, for which the Directors of Uzma Group are solely responsible. The financial forecast and projections are prepared based on assumptions which are generally future oriented and are therefore subject to uncertainties. Further, the financial forecast and projections cover an extended future period for which there are inherent risks and therefore should be treated with caution. Actual results may be different from the forecast and projections because events and circumstances frequently do not occur as expected and the differences may be material. No representation or warranty, express or implied, is made by us with respect to the possibility of their achievement.



3. Bases of valuation

We are of the opinion that both, the Market and Income Approaches, are appropriate for the valuation of Uzma Group.

In applying the Market Approach, we have considered the estimated annual maintainable earnings of Uzma Group, the transaction multiples of similar transactions and price earnings multiples of guideline companies in the oil and gas industry, the marketability discount and the risk associated with Uzma Group. Accordingly, we have, in arriving at our opinion, applied the price earnings multiple of 5 times, and transaction multiples of 0.5 times for revenue and 5 times for net earnings.

For the Income Approach, we have considered the expected rate of return on equity, the prevailing risk free rate, beta, the market risk premium, the risk profile specific to the oil and gas industry and the risks associated with Uzma Group in arriving at our judgement. Accordingly, we have applied the discount rates of 25% and 30% to the projected net earnings cash flows available to the shareholders of Uzma Group.

In this connection, it must be noted that both the aforesaid valuation approaches were predicated on the fact that Uzma Group is privately owned and its shares are not publicly tradable as at the subject valuation date, namely 31 December 2006.

4. Opinion of value

On the basis of the foregoing, the indicative valuation of the entire equity interest in Uzma Group as at 31 December 2006 ranges from **RM40 million to RM45 million**.

Yours faithfully

A handwritten signature in black ink, appearing to be 'Ernst & Young'.

Ernst & Young AF:0039
Valuation and Business Modelling
Transaction Advisory Services
Kuala Lumpur

A handwritten signature in black ink, appearing to be 'Yeo Eng Seng'.

Yeo Eng Seng 1212/12/08 (J)
Partner
National Director
Transaction Advisory Services

13. DIRECTORS' REPORT

(Prepared for inclusion in this Prospectus)

23 JUN 2008

The Shareholders of
Uzma Berhad
312, 3rd Floor, Block C
Kelana Square
17 Jalan SS 7/26
47301 Petaling Jaya
Selangor Darul Ehsan



Uzma Berhad
(769866-V)

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www.uzmagroup.com

Dear Sir / Madam,

On behalf of the Board of Directors of Uzma Berhad ("**Uzma**" or the "**Company**"), I wish to report after due enquiry by the Board of Directors of Uzma, that between the period from 31 December 2007 (being the date to which the last audited financial statements of the Company and its subsidiaries ("**Group**") has been made up) to the date of this letter (being a date not earlier than 14 days before the issuance of this Prospectus), that: -

- (a) the business of our Group has, in the opinion of the Directors, been satisfactorily maintained;
- (b) in the opinion of the Directors, no circumstances have arisen since the last audited financial statements of our Group which have adversely affected the trading or the value of the assets of our Group;
- (c) the current assets of our Group appear in the books at values which are believed to be realisable in the ordinary course of business;
- (d) save as disclosed in this Prospectus, there are no contingent liabilities by reason of any guarantees or indemnities given by our Group;
- (e) there have been, since the latest audited financial statements of our Group, no default or any known event that could give rise to a default situation, in respect of payments of either interest and / or principal sums in relation to any borrowings, in which the Directors are aware of; and
- (f) save as disclosed in this Prospectus, there have been, since the last financial statements of our Group, no material changes in the published reserves or any unusual factors affecting the profits of our Group.

Yours faithfully,
For and on behalf of the Board of Directors of
UZMA BERHAD

Dato' Kamarul Redzuan Muhamed
Non-Independent Managing Director / Chief Executive Officer