



**UNIVERSITI PUTRA MALAYSIA**

**MALAYSIAN EXPLORATION ASSET TEAM**  
**Strategic Case for Multi-Discipline Team**

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*May I take this opportunity to express my special thanks to all lecturers who have dedicatedly involved in the MBA programme.*

*... and to my lovely wife and children, who have been very cooperative and giving me the support, all the times.*

**PART -1**  
**CASE WRITING**



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## **MALAYSIAN EXPLORATION ASSET TEAM**

### **- Strategic Case for Multi-Discipline Team**

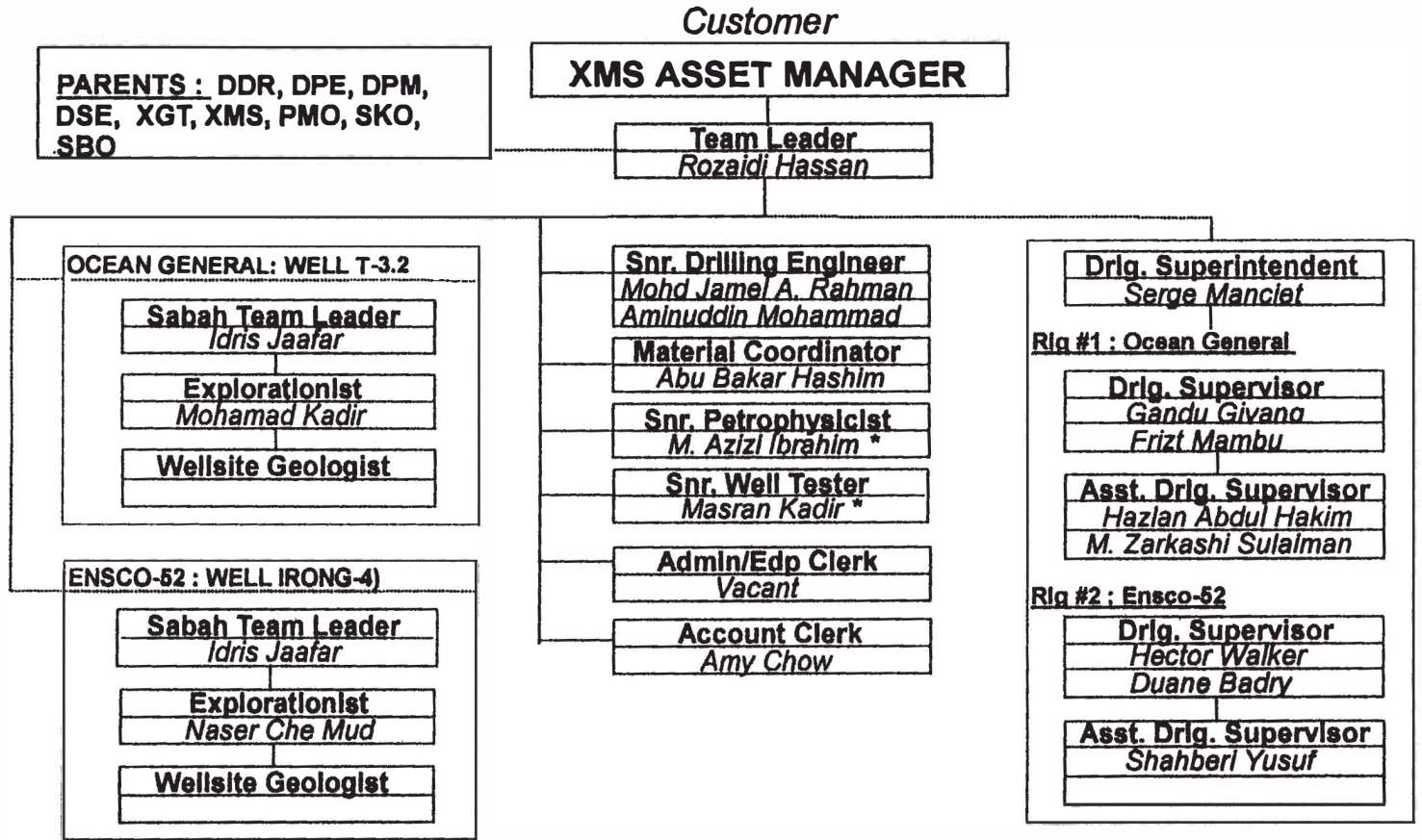
#### **INTRODUCTION**

Malaysian Exploration Asset Team (MEAT) was a typical multi-discipline team in Petronas Carigali Sdn Bhd. It was formed in February 1997 with the aim to manage the company's exploration drilling operation in offshore Malaysia. MEAT is relatively a small sized team comprised a group of professionals, engineers and non-technical staffs. Its goal was to manage the operation in a safe manner, cost-effective, smooth and environmental-friendly operation. Figure 1 shows the organization chart of the team whereby it was consisted of twenty-seven members from nine different backgrounds. The team leader, who reported to the Exploration Manager, acted as the head of the operation and accountable for the overall performance of the team. Based on the previous 1996/97 domestic exploration drilling programme, the overall performance of the team was satisfactorily as recognized by the management of the company.

Since the team would be continually provided the same services, moreover with the increasing cost of operation, its always important for the team to analyze the environment that could affect its performance. A cost-effective operation would be the most important factor for the team, especially during the economy crisis of the country. As such, strategic management approach would be useful for the team in determining its operational strategy. From strategic point of view, a prudent strategic planning that follow a close parallel to the company's vision and objectives, would be

Figure 1 : MEAT Organization Chart

# Malaysia Exploration Asset Team



\* DPE staff on temporary secondment ;  
as and when required

able to develop its unique capabilities in reinforcing the competitive standing of the company's business in the oil and gas industry.

In this paper, "The Exploration Industry" provided some general information about the offshore exploration drilling operation that were related to MEAT's activity.

## **THE EXPLORATION INDUSTRY**

Exploration was an activity of finding oil and gas. It was the very heart of petroleum industry whereby every other operation in the industry depended on its success. The exploration activity which was the beginning of the company's upstream activities, was a laborious process involving sophisticated high-technology skills, large investments and high risks.

Offshore exploration drilling operation was not simply a matter of the company bringing a drilling rig onto a chosen location and starting to make a hole in the seabed whenever and however it pleases. When the company considered that money was worth spending on exploration (and this depended largely on the current market price of crude oil), it must first decide, on the basis of available geological evidence, in what part of it will explore, such as in the Malay Basin of the South China Sea. In the international operations, one region might be more attractive than another, particularly if strong incentives were offered from the host country. In Malaysia, these incentives were stipulated in the 'Production Sharing Contract' or also known as PSC. The oil companies who had been awarded this contract were known as the PSC contractors or PSC companies.



After acquired the permission from PETRONAS to carry out the exploratory work, which might take months or even years, large amounts of money and time were spent in carefully examining the subsea geology of the chosen area for likely hydrocarbon-bearing locations. When a promising area had been identified by surveys and an available drilling site was selected, the company must then went through the machinery of applying for the necessary permission from the controlling government authorities (such as Department of Environmental, Treasury Department, PETRONAS and others) to go ahead with the project. This alone could take months or, with some cases in the international operations, even years to finalize. The governments and its agencies had to be sure that the project would be beneficial to their own interests as well as those of the investors.

With an offshore exploration well often costing between USD8 million to USD10 million to drill, and far more likelihood of being a 'dry hole' than a commercial bonanza, the viability of the well program had to be very carefully considered before large amounts of investors' money were poured into the project. If the chances of success were calculated to be worth the risks involved, finance or budget then had to be raised and partnerships sometimes entered into spread the enormous costs involved. Then contracts for the supply of a drilling rig and its crew, and for every possible item of equipment or service that would be required during the program had to be sought.

Once the rig had been hired and drilling had begun at an average spread cost to the company of USD150,000 a day, time was so costly and precious that not a day could be wasted on waiting for something that should have been ordered months



before. Even if the operation had been properly organized, it was always important to continuously seek for any technological and operational opportunities that could eventually reduce the total cost of the operation. With so much risk, the drilling rig's operation was naturally controlled extremely rigidly by the company, which largely accounts for the feverish and tense atmosphere often felt onboard.

### **The Organizations**

There were various companies and organizations involved to complete the offshore exploration drilling operation. They formed the work force and functioned according to their specialized field in the operation. In a typical offshore exploration drilling operation, this work force could be divided into four main groups: the operator, drilling contractor, supply and services companies, and government agencies.

### ***The Operator***

The operator was the company who managed and responsible for the operation. It could be Petronas Carigali Sdn Bhd (PCSB), Sarawak Shell Berhad, Esso Production Malaysia Incorporation, Nippon Oil, or any other operating oil companies in Malaysia. However, only one operator would be appointed for each operation, which was depending on the equity hold by the company or, merely based on appointment as agreed by the shareholders and PETRONAS. For example, PCSB had been the operator in PM9 due to its 60% equity in that PSC sub-block.

In order to be a successful operator, it was normally required the company to have a group of qualified personnel with strong technical and management

backgrounds that could manage the operational and personnel aspects of the operation. These personnel were composed of the company personnel in the office who managed and planned the operation, the personnel in the supply base who supported the operation, and the personnel onboard the rig who was directly involved with the physical work in the operation. In addition, the company also needed a series of standard operation procedures that guided and assured the safety of hundreds of personnel who will invariably be involved, as well as for the protection of the environment.

In the operation managed by MEAT, these personnel could be from the various departments and regional offices of the company. They involved in the operation either directly or indirectly, by supporting and assisting the team to accomplish the operation. The departments of such Procurement, Finance, Drilling, Petroleum Engineering, and Health and Safety, provided the team with the required personnel and services as needed for the operation. For example, the drilling and petroleum engineering department provided the team with the engineers and operation procedures, while the finance and procurement department assisted the team in matters related to the accounting, contractual and purchasing of materials.

The regional offices known as Sarawak Operation (SKO), Sabah Operation (SBO) and Peninsular Malaysia Operation (PMO) which were located in Miri, Kota Kinabalu and Kerteh, respectively, assisted the team by providing full support in the logistic and state government matters. They organized and managed the personnel in the supply base and helibase, which was an important role in any offshore drilling

operation. They also provided the assistance in all matters related to the state government such as the custom and immigration clearances for the materials and personnel. Without the assistance from the regional offices, it would be very difficult for the team to manage those localized requirements.

Since the offshore exploration drilling operation in PCSB involved various departments and regional offices, a general understanding known as "Parent-Customer Agreement" (PCA) had been established. Under this agreement, they would help each other to achieve their respective key performance indicators (KPI), which required each of them to perform their duties accordingly. For example, on the basis of the PCA, the regional offices agreed to provide the services for helibase and helicopter to MEAT under condition that the team would have managed its personnel from being late at the check-in counter. In this example, late check-in would result a flight delay, which was one of the KPI for the helibase personnel in the regional offices. On the other hand, a flight delay might cause a downtime on the operation, which was one of the KPI for MEAT.

### *The Drilling Contractor*

In the first half of the twentieth century, it was common for oil companies to have their own rigs and personnel for the drilling operation. PETRONAS used to have its own rig named 'Paremeswara' that was managed through its subsidiary, Petronas Marine Sdn Bhd. However, due to cost-effectiveness and operational in-efficiencies, it was no longer a preferred practice in the oil and gas industry.

The rig and its personnel were now managed by drilling contractors who were specialized in managing the rig. Drilling contractors had the necessary men and skills, and a vast store of drilling experience, and between them they maintained a large fleet of many different types of rig. Some drilling contractors were active solely in offshore rig, while others owned both land and offshore rigs. Truck and fixed-platform were the typical land rigs, but hardly seen in Malaysia because of the oil and gas industry in this country were focused mainly in the offshore sector.

For the offshore exploration drilling operation, the most common rigs operated in the region, or even worldwide, were consisted of the jack-ups, semi-submersible and drillship. Each of these rigs had the advantages, which were depending on several factors such as the water depth, distance from shore, sea bottom conditions, weather and tidal conditions. For example, a conventional jack-ups would be useful for an exploration well in a 20 meter's water depth as it was too shallow for either semi-submersible or drillship. The drillship, however, could be economical for a short term programme due to its lower mobilisation cost, which was the result of its self-propelled and higher cruising speed specification.

Among these rigs, the semisubmersible was the most preferred and suitable for nowadays exploration drilling programme. Unlike the others, the submerged parts beneath the waterline that provided the buoyancy to the rig and intercepted the wave action, had given the capability to operate in a deeper water depth and rough conditions. For example, a newly designed semisubmersible can operate in the 2000 to 3000 meters of water depth.

On any of these offshore rigs, the personnel of the drilling contractor could be in the range of 60 to 70 people that comprised of various positions onboard the rig. This personnel which was known as the rig's crew, was working around the clock with two twelve hours' shifts and two sets of worker for each shift. The first set worked from 12:00 to 12:00 hours shift, while the other worked from 06:00 to 06:00 hours shift. They normally ended their offshore duty in every two week for the local personnel and four weeks for the foreigner.

Table 1

<b>OIL COMPANY PERSONNEL</b>	
<b>Position</b>	<b>No.</b>
Operator's Representative (Supervisor)	1
Assistant Supervisor	1
Geologists	2
Material Coordinator	1
<b>DRILLING CONTRACTOR'S CREW</b>	
<b>Position</b>	<b>No.</b>
Rig Superintendent	1
Tool Pusher	2
Bargemaster (Captain)	1
Barge Operators	2
Chief Mechanic	1
Chief Steward	1
Chief Cook	1
Catering Staff	8
Storeman	2
Subsea Engineer	1
Drillers	2
Assistant Drillers	2
Derrickmen	2
Floormen (Roughnecks)	6
Roustabouts	8
Crane Operator	2
Maintenance Roustabout	4
Electricians	2
Mechanics	2
Motormen	2
Welder	2



Medic/Clerk		1
	<b>SERVICE COMPANIES</b>	
	<b>Position</b>	<b>No.</b>
Mud Engineer		2
Cementer		2
Mud Loggers		4
Directional Driller		2
Electrical Logging		6

### ***Supply and Service Companies***

Apart from the drilling contractor, a large number of companies were invariably called upon to perform certain specialized jobs and provide special equipment of one sort or another. The operator might directly contract these supply and service companies, just as the drilling contractor, or else the drilling contractor sub-contracted them, but in any event, the final cost would ultimately be borne by the operator. Running casing, cementing, mud logging, fishing, inspection and directional drilling operations were the typical services rendered by these companies. Some of them were also supplying the consumable items such as cement and mud chemicals. The fuel and water were supplied by the supply base through a supply vessel whereby, these supplies were contracted by regional offices to the local suppliers.

During the offshore exploration drilling operation, there was a total of 15 companies that were providing the services and supplies. Most of these companies were comprised of Malaysian companies which were operating on the basis of agency, partnership or direct ownership with the overseas principle companies. For example, the Baker Hughes Malaysia was operating based on the partnership with the Baker Hughes International that was based in Houston, USA.

Since most of the supply and service companies had been directly related to their international companies, most of the supplies for the operation were obtained from overseas. For example, the downhole motor, mud chemicals, MWD equipment, logging tools and production test equipment were amongst the imported drilling materials and equipment to the operation. In the service sector, however, there was some changes lately whereby most of the "service hand" was represented by the Malaysian specialists. These changes could partly due to the effort made by the government and PETRONAS in the malaysianisation programme, and could due to lower overhead cost to these companies as compare to cost for expatriates.

Apart from these companies who provided their respective services onboard the rig, there was also another service company who provided the services that linked between the rig and on-shore. They were the supply vessels and helicopters whereby, the supply vessels had been used to transport the heavier and bulkier cargoes, while the helicopters had been used to transfer offshore personnel. Sometime the helicopter also had also been used to transport urgent items, provided it small and lighter.

The supply vessels could be divided into two categories, the straight supply vessel and dual-purpose vessels (called as supply vessels cum anchor handler, AHSV). The AHSV functioned as the supply vessel during normal operation, and became the anchor handler during the rig move from one location to another. There was not much different between the straight supply vessel and AHSV, except the AHSV were more powerful as it was needed during the anchor-handling jobs. As such it chartered rates was much higher than the straight supply vessels. This chartered rate was fluctuate



wildly from week to week according to demand and availability of vessels. In the operation managed by MEAT, two AHSV were chartered throughout the duration of the programme. However, when it was operated in Sarawak that involved high activity and long distance between the supply base in Labuan and the location of the rig, a third vessel were acquired through 'spot chartered'.

Besides hiring supply vessels, as part of the safety regulation for offshore exploration drilling operation, the company had also to provide a safety boat. This safety boat or known as stand-by boat was required to stay nearby the rig to assist the rig to evacuate the personnel in the case of an emergency. However, it might be necessary to hire additional for this purpose if any one of the supply vessel could be used to stand-by close to the rig on a rotational basis

Concerning the helicopter services in the country, Malaysian Helicopter Services (MHS) was the only helicopter company that was given with the license to operate in the commercial sector. Previously there was another one, however, the license had not been extended anymore since the one of their helicopter was crashed in year 1995. In the case of MHS, the service contract was procured by the company's regional offices, which then they extended the services to the team.

In some other operation especially in the smooth-water areas, there was a vessel known as "fast launch", which it had also been used for transferring the offshore crews, whenever it was cheaper to hire than the helicopters.

### ***Government Departments***

Along with PETRONAS who had been the national oil companies, other government departments and ministries were also involved in the operation. Their involvement was in the form of government rules and regulation, which mainly due to the needs to ensure the oil companies would operate safely and in the best interest of the nation and its resources. These departments and ministries of such the Department of Environmental (DOE), Department of Occupational Safety and Health, Ministry of International Trade and Industry (MITI), and Ministry of Finance (MOF), were involved in the operation by furnishing the oil companies with regulations as needed. For example, the requirement for the environmental impact assessment (EIA), the prohibition for the used of oil-based mud (OBM), the requirement for import permits for oilfield machined equipment, and the needs for landing rights, were some of the regulations determined by this work force.

## **COMPANY BACKGROUND**

### **Mission Statement**

Petronas Carigali Sdn Bhd (PCSB) was a wholly owned subsidiary of the Malaysia's national oil company, PETRONAS (i.e the acronym for Petroliam Nasional Berhad). It was incorporated on 11 May 1978 with principal activities in exploration, development and production of oil and gas. Being a subsidiary of PETRONAS, the company had been sharing the same mission statement that defined the scopes and competencies of its business. It also clarified what was the business of the company that uniquely distinguished from other's organization. The mission statement of the company was as follows:

*WE ARE BUSINESS ENTITY*

*PETROLEUM IS OUR CORE BUSINESS*

*OUR PRIMARY RESPONSIBILITY IS TO DEVELOP AND ADD  
VALUE TO THIS NATIONAL RESOURCE*

*OUR OBJECTIVE IS TO CONTRIBUTE TO THE WELL BEING  
OF THE PEOPLE AND THE NATION*

"WE ARE BUSINESS ENTITY" meant the company was organized and operated in a rational, economic and commercial manner that could enhance the shareholder's value or wealth. As such the company had to conduct its business professionally and ethically that lead to clear business objectives, growth, profitability and customer-focused business oriented.

"PETROLEUM IS OUR CORE BUSINESS" meant the company would focus the energy and allocated resources to its principal business. In a broader meaning, as refer to PETRONAS and its group of companies, the core business would also refer to the refining, trading and supply; marketing; distribution; petrochemicals and other manufactured petroleum derivatives. It also included other non-petroleum business that reinforced the strategy and performance in the core business. As PETRONAS and its group of companies needed to assure a continuous future supply of petroleum for the country and continuous skill building in this core business, it would selectively seek the overseas opportunities in exploring and securing of new reserves as well as developing and adding value to these resources.

The mission of developing and adding value to the national resources of a nation had given the company and PETRONAS as a whole, a major role. Wherever it ventured to the chosen areas of the globe - it was the mission of the PETRONAS and its group of companies in adding value by converting the primary resource into higher value products, that would satisfy the needs of customers and brought benefits to the people of the nation. In the attempt to add this value to the national resource, its activities had to be guided by criteria of synergy, significant profit contribution and strategically fitted with the core business.

Its last mission statement, the company objectives of contributing to the well being of the people and the nation, could be in the form of enhancing the quality of life of the people by providing secured supply of quality petroleum and its related products or services at a fair price. Consequently, it would promote and create more business as well as develop job opportunities in the petroleum industry. In a broader scale, PETRONAS and its group of companies would contribute by enlarging the country's individual base, providing a secure supply of industrial materials through petrochemicals, and ensure a safe and clean environment wherever it operates in the world. These contributions, however, would be subject to the condition precedent that all the business activities must be viable and profitable.

### **Shared Values, Management Style and Work Cultures**

Along with the mission statement, PETRONAS and its group focused their management activities on sharing certain values, management styles and work cultures.

The combination of these shared values, management styles, work cultures and, the mission, had created a trilogy in PETRONAS' management (Figure 2).

Loyalty, professionalism, integrity and cohesiveness were the values being shared by PETRONAS and its group of companies whereby, it disclosed what did the organization believes. Loyalty referred to the sense of responsibility to the nation as well as the sense of belonging and dedication to the corporation. A good example of loyalty as manifested by mutual respect between employees and companies. Professionalism referred to the attitude of pursuing superior performance in a committed, innovative, proactive and disciplined manner. Commitment to being unreservedly honest and upright in everything one does, was the value of the integrity. The cohesiveness was referred to the group unity of purpose, well being and interests with a caring attitude for the individuals.



Figure 2 - Petronas Trilogy

The management styles and work culture were referred to the customer oriented, results driven, value work contribution, teamwork, opportunity driven, information rich, motivating environment, responsive structure and operational decentralization. These styles and cultures would affect an individual work behavior in the organization. It influenced the reaction of the employees toward the direction, effort, persistence and planning, which eventually would guide and shaped the whole organization toward the desired mission and objective of the companies.

### **Vision Statement**

In the year 1995, PCSB had established its vision that provided a sense of purpose to the organization, posed a significant yet attainable challenge, and draw the basic direction to the pursuit of that challenge. After given a serious consideration into its external and internal environmental factors, the company came to consensus that the vision for company as follows:

**A MULTINATIONAL E & P COMPANY OF CHOICE;  
CREATING VALUE  
THROUGH CONTINUOUS IMPROVEMENT AND GROWTH**

The company believed this vision would be able to generate a contagious enthusiasm in the organization. Each wording in the vision statement carried its own meaning that clarified "What did the company want to become?"

A MULTINATIONAL E & P COMPANY meant the company vision to be the following:

- The growth of the business would be based on a shrewd strategic planning of its principal activities throughout the world.
- It's overseas operating subsidiaries in the selected countries would be a highly responsive organization to the local business environments and opportunities.
- The organization of the company would comprise of a multicultural management team and staff, domestically and internationally.
- Its management and business practices would be reviewed and adjusted accordingly as needed for the company to compete globally, and to be a world class organization.
- The company would strategically select and strengthen its core capabilities in a way that its competencies would be recognized internationally.
- The company would develop a clear differentiation from other national oil companies, as a highly competitive business entity.
- Maximize exploitation of competencies would be acquired through privileged domestic position for developing international business.

COMPANY OF CHOICE meant the company vision to be the following:

- A company that would be keenly preferred by all stakeholders.

- Host governments would see the company as a valuable partner and contractor actively supporting and contributing towards development of its industry and people.
- Oil majors companies would favor the company as equity partner and Joint-Venture operator in the development of their business opportunities worldwide.
- Major suppliers would favor alliance with the company to share in technology innovation and cost optimization.
- Employees valued the company as a caring organization, which develops the individual to his maximum potential.

CREATING VALUE meant the company vision to be the following:

- Adopted a value-based management framework for strategizing, planning and undertaking business operations, which leads to the following:
  - Emplacement the critical measures of performance for business units and processes.
  - Evaluating contribution of business units and activities to value creation.
  - Continuously improve the business processes and reallocating the resources to maximize value creation.
- Strategically developed core capabilities in the E&P business to achieve competitive advantage and growth internationally.



- Achieved total shareholder return at the top quartile range of the global upstream industry.
- Maximized value for PETRONAS Host Governments, Partners and employees.

CONTINUOUS IMPROVEMENT AND GROWTH meant the company vision to be the following:

- The company would be acknowledged as an organization that continuously seeks to improve itself - a learning organization.
- Improvements would be in the aspects of its capabilities, business processes, quality of people and their skills, organization's structure and the systems that link it together, and its culture of the organization.
- Improvements would lead to growth:
  - Personal and professional growth - richer, more energizing environment in which to work.
  - Physical growth - in the acreage under exploration and the reserves that are booked.
  - Financial and economic growth - more revenues and profit.

### **Strategic Objectives**

In any organization, as it was important to develop a strategic objective that follows a close parallel to the vision, PCSB had identified and established its strategic