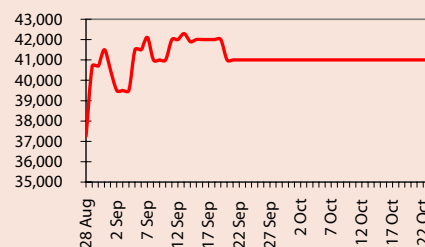


Chart 1 - Earnings Model - PTSC

	FY 2003	yoy	FY 2004	yoy	FY2005	yoy	FY2006E	yoy
Sales (US\$ '000)	215,461	14.08%	149,121	-30.79%	198,331	33.00%	224,352	13.12%
EBT (US\$ '000)	9,450	-23%	9,357	-0.99%	13,014	39.08%	15,039	15.57%
Net Profit (US\$ '000)	6,214	-20.70%	6,354	2.26%	20,520	65.57%	14,137	34.38%
Pre-tax Profit Margin	4.39%		6.27%		6.56%		6.70%	
Net Profit Margin	2.88%		4.26%		5.30%		6.30%	
EPS (US\$)	0.06		0.06		0.11		0.14	
P/E	NA		NA		NA		NA	
P/B	NA		NA		NA		NA	
ROE	15.83%		14.63%		18.60%		20.42%	

	FY 2007E	yoy	FY 2008E	yoy	FY2009E	yoy	FY2010E	yoy
Sales (US\$ '000)	251,274	12.00%	281,427	12.00%	315,198	12.00%	353,022	12.00%
EBT (US\$ '000)	18,527	23.19%	22,440	21.12%	26,835	19.58%	31,775	18.41%
Net Profit (US\$ '000)	17,416	23.19%	18,141	4.16%	21,693	19.58%	25,687	18.41%
Pre-tax Profit Margin	7.37%		7.97%		8.51%		9.00%	
Net Profit Margin	6.93%		6.45%		6.88%		7.28%	
EPS (US\$)	0.17		0.18		0.22		0.26	
P/E	NA		NA		NA		NA	
P/B	NA		NA		NA		NA	
ROE	22.76%		20.73%		22.79%		25.01%	

Chart 1A - Price Chart



Source: VinaCapital

Chart 1B - Stock Ratio Data

Price	VND 41,000
Outstanding shares	100,000,000
52 Week Range	37,256 - 42,300
Performance since IPO	10%
Performance (12 months)	NA
Market Capitalization	VND 4,100,000,000,000 US\$ 256,250,000

Source: PTSC Report

## Petroleum Technical & Services Company (PTSC) - Hold

- Diversified provider of services to the Vietnamese oil and gas industry
- Total assets worth more than US\$200 million
- IPO was on 28 August, 2006 with an average accepted bid price of VND 37,256
- About 20% market share in oil and gas technical services sector and 80% share in oil maritime services
- Key part of the industry value chain
- Pursuing a diversification strategy and has plans to follow PetroVietnam overseas
- We estimate sales and net income growth of 12% and 16%
- We see fair value at about VND28,000 per share

Chart 1C - Key Numbers

Unit: VND mm

	2005	2004	2003
Total assets	2,394,441	1,839,458	1,914,813
Owner's Equity	1,116,847	712,466	673,018
Revenue	3,292,450	2,347,011	3,362,909
Pre-tax profit	228,131	147,270	147,499
After-tax profit	165,763	100,004	101,815

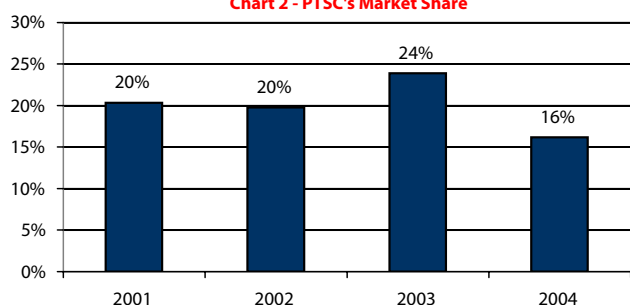
Source: PTSC Report

Chart 1D - Main Ratios

	2005	2004	2003
<b>Financial Strength</b>			
- Current ratio	1.59	1.45	1.39
- Quick ratio	1.48	1.26	1.14
- Tot Debt/Tot Eqty	53.4%	61.3%	64.9%
<b>Profitability Ratio</b>			
- Income Bef Tax % Margin	6.9%	6.3%	4.4%
- Income Aft Tax % Margin	5.0%	4.3%	3.0%
<b>Management Effectiveness</b>			
- ROA	6.9%	5.4%	5.3%
- ROE	14.8%	14.0%	15.1%

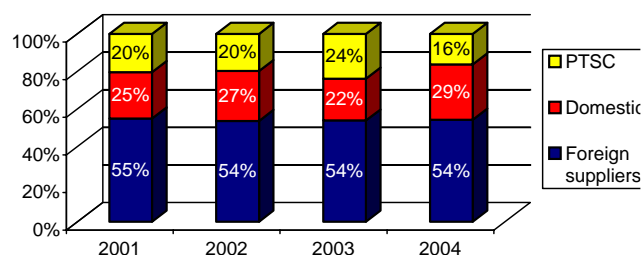
Source: PTSC Report

Chart 2 - PTSC's Market Share



Source: EIU, VinaCapital

Chart 3 - Oil and Gas Equipment & Services Market Share



Source: VinaCapital

The oil and gas industry in Vietnam has a positive medium term outlook something that will greatly benefit the technical services sector. PTSC is the best play in the sector with a grip on the maritime transport market and a strong presence in other business areas such as labour and equipment supply. Therefore PTSC is a good investment for long term investors. However following a highly successful auction the stock is richly priced at xxx forward P/E. While growth is reasonable the risk of increasing competition may continue to erode the company's market share over the next few years. Therefore we do not believe a premium is justified and would wait for share price weakness before buying. Therefore we rate the stock a HOLD.

PTSC's auction took place on the 28th of August. With an offer price of VND 10,500 (or 1.05 times over book value), the registration for auction was over-subscribed 6 times. The lowest accepted bid price was VND36,100 and the highest one was VND50,000. However, with an average price of VND 37,256 (or 3.7 times over book value) and P/E of 16.5x, P/B of 1.7x; it really exceeded the expectation of many investors, especially, foreign investors. As a result, foreign investors only acquired 1.4 million or 3.8% shares available for bidding (or 1.4% total outstanding shares).

**EXECUTIVE SUMMARY**

Crude oil has become Vietnam's largest export earner. Net oil export, after taking into account the importation of refined products, increased from 3.5% GDP in 2004 to 4.8% in 2005. Meanwhile the country is building or planning to build three oil refineries in a bid to reduce dependency on imported refined oil products. This provides a good backdrop for the future development of the oil support industry, of which PTSC is one of the main players.

PTSC holds a nearly 80% market share in the oil maritime services market which is a key part of the value chain in the oil and gas industry (Appendix 4). We believe PTSC can grow with the industry whilst improving its profit margins by investing in new equipment and improving its skillsets.

**Issues for discussion**

Whilst writing this report we note that PTSC's financial statements lack transparency and independently audited reports are limited in terms of providing details of physical inventory, fixed assets, works in progress, and some receivable and payable items.

**INDUSTRY ANALYSIS**

**Industry overview**

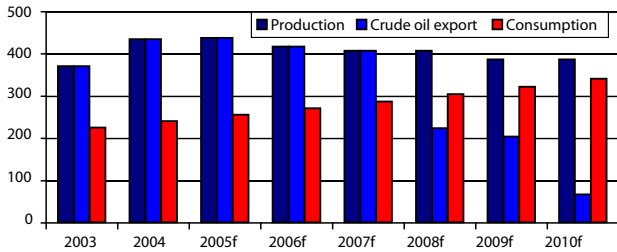
World oil production and consumption have increased significantly with a CARG of 88% for both production and consumption. In the last two decades, world oil consumption has exceeded production in absolute value.

In 2005, the price of oil was around US\$54.52 per barrel, an increase of 42% compared to 2004 and 91% compared to 2000. This year, the price has increased to US\$70 per barrel, an increase of 28% compared to 2005. Recently oil prices have fallen back somewhat but we see strong demand continuing from the BRIC economies (Brazil, Russia, India and China) and instability in Middle East Region. This will prevent a large sustained correction.

Crude oil has become a major export earner for Vietnam. Thanks to the increase in oil price recently, oil exports surged by 30% in value in 2005, despite no change in volume. We hope that the increase in oil demand in our main markets and the increase in price can offset lower oil production in Vietnam over the next five years. The Government considers the oil and gas industry, especially offshore exploration and production, as a first priority for development.

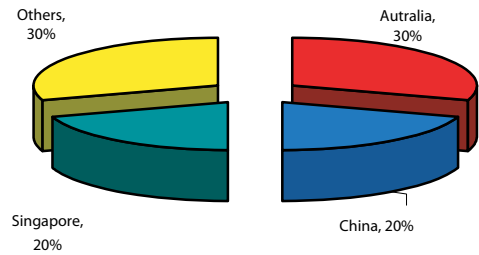
Currently, nearly all crude oil produced in Vietnam is exported and all refined petroleum is imported. When the local refineries come online in 2008, exports will decrease and most production will be used for local demand. The rapid expansion of the Vietnamese economy - GDP growth of 7% to 8% per year - has led to surging demand for energy which is projected to grow at a rate of over 10% annually, according to International Business Strategies (IBS).

Chart 4 - Vietnam Oil Production, Export and Consumption ('000 b/d)



Source: EIU, VinaCapital

Chart 5 - Vietnam Oil Market



Source: BMI, VinaCapital

The Vietnam oil export markets focus on three main customers - Australia, China, and Singapore - who have a strong demand for imported oil and have big gaps between their own production and consumption (see Appendix 2). We estimate that the weighted average CARG from 2003 to 2010 of these three markets is over 6%, taking the bulk of Vietnamese oil exports.

**Oil and Gas Equipment and Services Market**

According to IBS's Report on Up- and Mid-Stream Oil and Gas Equipment and Services in Vietnam, the Vietnamese Government is encouraging investment from both local and foreign sources in offshore oil and gas exploration and production. It is estimated that an investment of about US\$11 billion will be required for the development of the offshore activities during the period 2001- 2010. Only 25-30% of the country's continental shelf with hydrocarbon potential has been awarded to over 50 foreign oil and gas companies, representing a total investment of over US\$4 billion. The remaining areas (70-75%) with water depths of 200m or more are unexplored and open for new bidding.

In the area of exploration and production, PetrolVietnam, the state owned oil company will continue its policy of attracting foreign investment to open acreages, providing investment incentives for deep water and remote blocks with complex geological conditions. PetrolVietnam will also focus on enhancing the oil recovery ratio of existing fields such as White Tiger and others.

In the coming years, PetrolVietnam will utilize its own resources as well as attract more foreign investment to increase proven reserves and sustain annual production of 360,000 to 400,000 barrels per day of crude oil by the year 2010. (In 2004, PetrolVietnam accounted for 65% of oil production with over 271,000 barrels per day.)

At the same time, to exploit the huge potential of natural gas, PetrolVietnam is working with other government agencies to develop the local gas market. The first priority is to complete several ongoing offshore gas exploration and production projects and to accelerate the production and utilization of associated gas with the aim of producing 10 to

12 billion cubic metres (bcum) by the year 2010.

The expanding offshore exploration and production has created a steadily growing market for offshore oil and gas equipment and services which was estimated at US\$920 million in total in 2004. More recent numbers are hard to come by. We believe that the rapid expansion of the oil and gas sector indicates that the market for offshore equipment and services will grow at an estimated rate of 10% annually over the next several years.

The market for offshore oil and gas equipment and services in Vietnam can be divided into two segments based on the nature and behaviors of buyers:

*Local buyers:* This segment includes subsidiaries and affiliates of PetrolVietnam, of which Vietsovpetro is the largest buyer, currently contributing about 65% of the nation's crude oil production. We estimate that Vietsovpetro annually procures US\$300 million (32% of the total market) worth of equipment and services for their offshore exploration and production.

*Foreign buyers:* This segment includes foreign companies who are involved in the oil and gas sector as investors, contractors, operators, consultants, suppliers, and procurement agents. Foreign buyers represent about 68% of the purchasing power in the market. Foreign oil and gas companies active in operating in the offshore sector include BP (UK), ConocoPhillips (US), Unocal (US), PTTEP (Thailand), ONGC (India), Korea National Oil Corp. (KNOC), Noble Energy (US), Opeco (US), Soco International (UK), Premier Oil (UK), Petronas Carigali (Malaysia), Nippon Oil Corp. (JVPC), Idemitsu (Japan), Zarubezhneft (Russia), and Talisman Energy (Canada) and Santos (Australia).

**Porter's Five Forces Analysis**

**Threat of New Entries = Medium to High**

There are two kinds of new entries: newly established local companies and foreign companies expanding into the Vietnamese market. Newly established local companies do not constitute a threat, but new entrants from abroad present a big challenge for PTSC. This is especially true

for machine and equipment suppliers because they have advanced technology and management know-how, have been operating in the industries for a long time, and can simply copy their penetration strategies into Vietnam. With the low product differentiation that is characteristic of the industry, it is easy to supply services and products to existing customers and gain market share. Moreover, with entry made easier by the Petroleum Law, foreign suppliers can easily set up shop.

Having said that the oil and gas industry is very sensitive to government policy. Currently, foreign companies keen to invest in Vietnam have to form joint-ventures with PetroVietnam. Via PetroVietnam, the Government keeps tight control on oil exploration and subsequent exports. Being a subsidiary of PetroVietnam, PTSC enjoys "preferential treatment" in supplying services to PetroVietnam's projects.

This industry also has first mover advantages. PTSC has set up its network in key locations and enjoys a strong relationships with customers and other companies in the industry. This is an important intangible asset, especially in Vietnam's current relationship driven business environment.

High capital requirements and heavy investment costs lead to a long-term pay back period and high switching costs. This is a heavy barrier for those who wishing to enter the industry.

### **Supplier power = Low**

Switching costs are low. There are many suppliers around the world and PTSC can easily find an alternative supplier for their imported machines or vessels. Therefore it enjoys pricing power over most of its suppliers.

### **Substitution = Low**

The oil and gas industry requires specialized machine, equipment, and services which are used for the industry only. In other words, the products and services supplied to oil and gas are high differentiated from those in other industries. For instance, it is hard to refit a passenger or cargo ship for oil and gas, which requires very different safety and design elements.

### **Industry competitors = Medium to high**

PTSC currently dominates the oil maritime services sector. But it faces strong competition in other services. With moderate industry growth in the last few years and low product differentiation among competitors, the sector has excess capacity, leading to fierce price competition to keep market share.

In the Vietnamese market, PTSC has some distinct advantages over foreign suppliers thanks to their extensive connections, detailed understanding of the market and culture, and their lower operating costs. However, PTSC faces difficulties in terms of capital shortages, weaknesses in management, obsolete technologies, and lack of experience in delivering on large-scale internationally-funded projects.

Foreign firms advantages due to their advanced technologies and technical expertise, in-depth experience and track record, reliable and high quality products, strict adherence to international standards, and professional service.

Amongst the foreign buyers, customers adopt very professional procurement practices even in the projects in which PV is one of the partners. As a result, suppliers have to compete primarily on technologies, quality, experience, services, and prices (or return on investment). Relationships may open doors, but do not influence procurement decisions as much as in the case of local buyers.

### **Buyer power = High**

Buyers are extremely powerful. Commercial, mechanical, and services activities are all dependent on buyers' projects. There are too few buyers in Vietnam and PTSC has to follow PetroVietnam, its parent company, in many contracts. Selling prices are highly sensitive and selling costs can be opaque in many cases. Not only that, but low switching costs mean that customers are quick to change suppliers.

### **Key Success Factors**

To be more successful, PTSC can improve its relationship with PetroVietnam. This is a key factor as it follows PetroVietnam into international markets because PetroVietnam has some ongoing projects in the region. Additionally, PTSC must raise its technological prowess, compete better at the products and service level, and work on improving reliability and staff skillsets. They also need to focus on strengthening management in order to develop into a regional player.

## **COMPANY ANALYSIS**

### **Company Profile**

PTSC was a wholly owned subsidiary of PetroVietnam, which was founded in 1993 upon the merger of Petroleum Services Company and Geo-physical and Petroleum Technical Services Company.

Since its foundation, PTSC has quickly developed into the largest supplier of oil and gas services in Vietnam, with total assets worth more than US\$200 million. PTSC is headquartered in Hanoi and has a branch office in Ho Chi Minh City, ten factories, one project management unit and one joint-venture (Appendix 5).

The quality and safety of services supplied by the company are guaranteed by its quality management and HSE systems. Currently, PTSC is the main supplier of nearly all ship and port services, construction and maintenance services, and some other oil and gas support services. However for machine and equipment supplies, PTSC has faced heavy foreign competition because contractors can freely import such equipment from abroad.

PTSC goal is to maintain its position as a market leader in Vietnam and establish itself as a regional player over the

next decade. To help achieve that goal PTSC has committed to making the following capital investments between 2006 and 2008, totaling US\$407 million:

US\$353 million for 11 new vessels, including three vessels from 4,000 to 10,000 BHP (USD\$ 57million), a 2D vessel (US\$ 34million), two Floating, Production, Storage, and Offloading (FPSO) vessels (US\$180 million), and two Floating, Storage, and Offloading (FSO) vessels (US\$105 million).

US\$53.6 million to expand base systems including those in Vung Tau, Phu My, Nam Dinh, and Dung Quat; to build new base systems in Hai Phong and Da Nang; and to build a commercial petroleum trading center in Da Nang, and a Comprehensive Services Center in Dung Quat.

### Breakdown of PTSC business operations

#### Ship and Port Services

These services accounted for 65% revenue in 2004, and PTSC dominates this sector. PTSC's supply base has achieved both ISO 9001:2000 and health & safety management system OHSAS 18001:1999 certification since 2002.

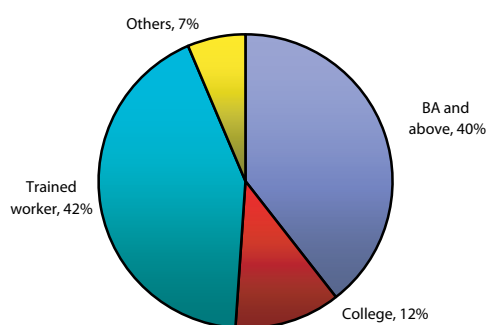
- *Offshore Support Vessels and Petroleum Products Carriers.* PTSC owns and operates a diversified fleet of well-maintained vessels, including anchor-handling tug supply (AHTS) vessels, towing vessels, diving/ remotely-operated vehicles (ROVs), fire-fighting vessels; utility, standby, and supply vessels; field support vessels; and escort/chase boats. PTSC has entered into short and long-term contracts for transportation of these kinds of products for many clients on both domestic and overseas routes.
- *Site Survey and Seismic Survey Services.* Analog and digital high-resolution geophysical surveying; soil boring, laboratory testing and analysis; and interpretation and reporting in two or three dimensions.

- *Floating, Production, Storage, and Offloading (FPSO/ FSO) Services.* PTSC owns and operates the FPSO vessel Ruby Princess and charters it out to Petronas. The Ruby Princess is a 141,000 DWT converted tanker with a capacity of more than 30,000 barrels per day.
- *Supply Base Services.* PTSC's supply base range of services includes terminal and jetty; office, warehouse, and open storage; handling equipment; supply of materials, equipment, spare parts, wharfage, docking, bunkering, forwarding, and chemical bulking.

#### Services supplies accounting for 7% revenue in 2004.

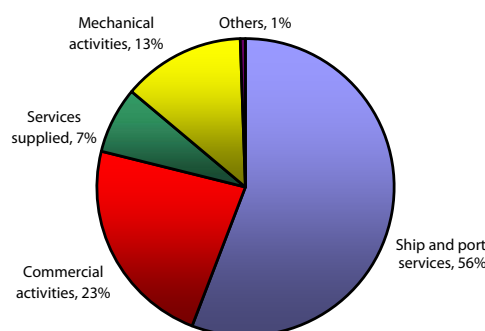
- *Offshore Installation, Hook-up, and Commissioning.* Accommodation for vessels for up to 200 people with lifting capacity of 400 tons. Pipe-laying and derrick barge with 3,000 tons lifting capacity and capable of laying pipe from 8" to 72". Other associated equipment such as welding machinery, piling hammer, crawler crane, diving spread, and survey equipment. Able to provide construction crews. Provision of support vessels: AHTS, work boat, supply vessel, offshore construction engineering and management.
- *ROV and Sub-sea Services.* PTSC provides a full spectrum of ROV services from the provision of platform and pipeline inspection to full work-class system support for drilling, construction, and cable burial activities. These services include inspection, repair and maintenance, construction support, drilling rig support, OV surveys (built and pre-route surveys), platform intervention, pipeline inspection, pipeline stabilization/ remedial works, submarine cable and flow line protection services, technical manpower, and project management services.

Chart 6 - PTSC's Labor Force



Source: PTSC

Chart 7 - Revenue by Types



Source: PTSC

## Mechanical activities accounting for 13% revenue in 2004.

In 2003 and 2004, this division performed poorly. A sharp increase in divisional COGS was higher than the sales increase leading to a noticeable decline in the division's profit margin from 4.1% in 2002 to 2.9% in 2003.

- *Operation and Maintenance (O&M) Services.* PTSC has been providing O&M services to a number of major oilfields in Vietnam including the Nam Con Son project for BP Vietnam, Rang Dong Project for JVPC, and the Ruby-B Project for Petronas Carigali Vietnam.
- *Mechanical & Construction Services.* PTSC has a fabrication yard in Vung Tau with total fabrication area of approximately 250m (jetty) by 450m and a contained warehouse of 600 sq. meters. Water depth in the yard is ranges from 9 to 12 meters and can accommodate vessels up to 25,000 tons DWT. The facility is also suitable for load-out facilities up to 3,000 tons from the fabrication yard onto the transportation barge/vessel using various methods of load-out, such as lifting, trailers, etc.

## Commercial activities accounting for 23% of revenue in 2004.

PTSC's commercial activities division has faced increasingly strong competition from other local and especially foreign suppliers who held over 50% market share for machinery and equipment supplied.

- *Oilfield Equipment Procurement and Supply.* Conductors, casing, tubing; chemicals for exploration and production; oil spill control equipment; structural steel plates, sections, tubes, grating and other materials for construction and fabrication projects; pipes, hoses, valves, and fittings; hydraulic pumps, high pressure pumps, and spare parts; HVAC equipment and spare parts; generators, electrical equipment and materials; control and instrumentation systems; fire and gas systems; communication systems; measurement calibration; laboratory equipment and spare parts; vessel equipment and spare parts; other materials, machinery and equipment related to oil and gas industry.
- *Transportation and Trading of Gas and Oil Products.* PTSC has established a network of 21 petrol stations and agents throughout North and Central Vietnam (in

Hai Phong, Nam Dinh, Thai Ninh, Da Nang, Quang Ngai provinces) selling retail/wholesale as well as providing fuel for industrial zones and enterprises.

PTSC, like many Vietnamese companies has stated its intention to diversify into other business areas such as real estate and financial investment in the hope of increasing revenue and profit. We will watch this closely to see how they perform.

## Company's market analysis

Total market size in any given year is highly variable due to the industry's dependence on contractors' projects. With a fairly small number of large contracts in play at any time, a delay in one contract can have a huge impact on market size during the fiscal year.

The market size expanded significantly from US\$600 million in 2001 to US\$950 million in 2002, and decreased slightly in the following years. PetroVietnam plans to invest between US\$4.5 billion and US\$5 billion over the next five years (Appendix 7). Thank to the investment, the market size should increase steadily.

In the recent years, PTSC's market share has seen some volatility along with everyone else in the industry. In 2003 market share increased by 4% compared to 2002, reaching 24%. But it then fell sharply to 16% in 2004 due mainly to problems in the mechanical activities division. While we have no numbers to hand we believe it recovered last year. Total investment of the industry in the next five years is estimated at over US\$7 billion. Assuming an average market share of 20%, we expect PTSC achieve sales of US\$1.5 billion or US\$300 million per year between 2006 and 2010.

## 5. Historical performance analysis

### 5.1 Profitability analysis

In 2004, net sales decreased 30% compared to 2003, due largely to a 79% drop in mechanical engineering and construction activities resulting from buyer-driven project delays. Moreover, the euro's 30% appreciation on the dollar created further delays in the delivery of products and services.

In 2003, COGS rose about 2% above the average because the cost of mechanical activities increased 79% in 2003,

Chart 8 - Total market size of offshore oil and gas equipment and services (US\$m)

	2001	2002	2003	2004
PTSC	122	188	215	149
Other Local Players	270	440	415	420
Foreign suppliers (directly import)	330	510	485	500
Total market size	600	950	900	920

Source: BMI, PTSC

while sales increased by only 76%. Part of the problem lies in the price calculation for goods manufactured and the reclassification of expenses. Independent auditors made certain qualifications in their review. However, thanks to the decrease in COGS from 93% of sales in 2003 to 90.7% in 2004, net margins increased from 2.9% in 2003 to 4.3% and 5.3% in 2004 and 2005 respectively. As a result, net profit increased 2% in 2004 and 66% in 2005 compared to 2003.

SG&A expenses increased from 1.5% in 2003 to 2.7% in 2004 due to increases in expenses related to tools, external products, and services. Some of these expenses were reclassified from COGS to SG&A expenses.

## Financial health analysis (Appendix 6)

PTSC has improved its financial performance in the last three years. In 2005 both ROE and ROA are somewhat more favorable compared to domestic peers such as PV Drilling, with 11% for ROE and 7.7% for ROA. However, these ratios are low compared to the regional average of 20% for ROE.

The fluctuation in profitability ratios was mainly due to the decrease in asset turnover ratios. Half of the fleet of vessels has been in use for over 20 years. PTSC hopes to address this problem through their 2006-2008 investment plan described above.

Low financial gearing leaves plenty of room for new debt. The financing ratio (Total Assets/Equity) has declined steadily from 2.85x in 2003 to 2.11x in 2005, whilst ROE has increased.

## Earnings Model

### Methodology

To value PTSC, we use three valuation approaches: Free cash flow to equity (FCFE), comparable P/E ratio and comparable P/B ratio. Our assumptions, which are based on a historical performance analysis, are noted below. The assumptions are supported by industry and PTSC's performance forecasts.

We also apply a discount or premium rate for each comparison due to the differences in financial health, company prospects, and the level of share marketability.

The final value is the weighted-average value of the results obtained from these approaches. Since these approaches are based on different assumptions their results will be weighted according to the assessment on their reliability.

### Assumptions and analysis

#### Sales

Based on the industry prospects and the our performance expectations for PTSC under the new management and increasing capital investment over the next five years, we project sales to increase by 12% per year from 2006 to 2010. This would be higher than the average growth rate of the

industry, which we forecast at 10%. This takes into account increases in selling price, moderate increases in output due to capacity constraints, and the revenue from other new products and services.

#### Operations details

Gross margins are expected to improve from an average of 8.3% in the period from 2003 to 2005 to 9.7% from 2006. We expect that the company will enjoy cost savings under the new management post equitization, especially on the COGS of the mechanical activities division, and land rental reduction for the next three years according to Decree No. 51/1999/ND-CP. Currently, PTSC has rented 1,220,347 m<sup>2</sup> in many key locations. In 2004, PTSC allocated a repaid expense for land rental of over US\$2 million. We assume general and administrative expenses will at 2.7% of sales.

We tie financial and other income, and financial and other expenses directly to net sales as we do not have enough accounting information to do otherwise.

#### Financing and debt servicing

We assume that there are no new loans taken on after 2005 and that debt principle repayment is 10%, with an average interest rate of 8%.

#### Taxes

PTSC will enjoy CIT exemption for the rest of 2006 and 2007, and CIT reductions of 50% (or 28%) for 2008 to 2010.

#### Capital expenditure

Under the investment plan for the period 2006 to 2008, we apply a capital expenditure rate of 51% of sales over this period. From 2009 onward, we allocate 8% of sales for capex and 8% of sales for depreciation escalation.

#### Market capitalization

Comparable firms are characterized by market capitalization of between US\$120 million and US\$350 million (plus or minus 50% of PTSC's US\$233 million market cap). Market capitalization is assumed to be the main determinant of comparability.

#### Other issues

We use constant prices moving forward.

Joint-venture distribution is estimated at 6% pre-tax profit. Fixed assets investment will be USD\$407 million over three years from 2006 to 2008. This will be partly financed to the tune of US\$64 million from the capital gains in the auction.

### Risk analysis

#### Inherent risk

PTSC provides products and services to oil and gas exploration and drilling companies whose operation are mainly at sea. Therefore, PTSC is exposed to risks from natural calamity

Chart 9A - Historical and Projected Income Statement

INCOME STATEMENT (Unit: USD\$mm)											
(US\$ mm)	2002	2003	2004	2005E	2006E	2007E	2008E	2009E	2010E	2003-2005	2006-2010
Net Sales	188.87	215.46	149.121	198.33	224.35	251.27	281.43	315.20	353.02		
Growth %	54%	14.1%	-30.8%	33.0%	13.1%	12.0%	12.0%	12.0%	12.0%	5.4%	12.2%
COGS	172.29	201.60	135.29	179.25	201.79	225.19	251.32	280.53	313.16		
% Sales	91.2%	93.6%	90.7%	90.4%	89.9%	89.6%	89.3%	89.0%	88.7%	91.6%	89.3%
Gross Profit	16.57	13.86	13.83	19.08	22.56	26.09	30.10	34.67	39.87		
Gross Margin	8.8%	6.4%	9.3%	9.6%	10.1%	10.4%	10.7%	11.0%	11.3%	8.4%	10.7%
Other Income	0.52	1.34	1.70	1.98	2.22	2.49	2.79	3.12	3.50		
% Sales	0.3%	0.6%	1.1%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	0.9%	1.0%
Selling & Admin Expenses	2.72	3.32	4.01	5.33	6.00	6.69	7.46	8.33	9.29		
% Sales	1.4%	1.5%	2.7%	2.7%	2.7%	2.7%	2.7%	2.6%	2.6%	2.3%	2.7%
Other Expenses	2.15	2.43	2.17	2.72	3.74	3.36	2.98	2.63	2.29		
% Sales	1.1%	1.1%	1.5%	1.4%	1.7%	1.3%	1.1%	0.8%	0.7%	1.3%	1.1%
EBT	12.21	9.45	9.36	13.01	15.04	18.53	22.44	26.83	31.77		
EBT margin	6.5%	4.4%	6.3%	6.6%	6.7%	7.4%	8.0%	8.5%	9.0%	5.7%	7.9%
Joint-venture distribution	0.00	0.31	0.53	0.78	0.90	1.11	1.35	1.61	1.91		
Income tax	4.38	2.93	2.47	1.71	-	-	2.95	3.53	4.18		
<b>Net Profit</b>	<b>7.84</b>	<b>6.21</b>	<b>6.35</b>	<b>10.52</b>	<b>14.14</b>	<b>17.42</b>	<b>18.14</b>	<b>21.69</b>	<b>25.69</b>	<b>7.70</b>	<b>19.41</b>
Net Margin	4.1%	2.9%	4.3%	5.3%	6.3%	6.9%	6.4%	6.9%	7.3%	4.1%	6.8%

Chart 10 - Unlevered FCFE (Unit: USD\$mm)

	2006E	2007E	2008E	2009E	2010E
<b>Net Income</b>	14,137	17,416	18,141	21,693	25,687
+ Depreciation	21,204	22,901	24,733	26,711	28,848
<b>CF from Operation</b>	35,341	40,316	42,873	48,405	54,535
- Capital Spending	71,334	135,700	135,700	25,216	28,242
- WC Change	2,424	2,508	2,809	3,146	3,523
<b>Unlevered FCF to Equity</b>	<b>-38,417</b>	<b>-97,892</b>	<b>-95,635</b>	<b>20,043</b>	<b>22,770</b>

Chart 9B - Historical Balance Sheet

BALANCE SHEET (Unit: USD\$mm)

	2001	2002	2003	2004	2005E
Cash	8,817	6,141	4,769	8,963	9,262
Accounts receivables	6,431	22,187	39,737	41,144	31,255
Inventories	27,710	12,169	9,916	7,521	19,204
Other current assets	1,434	0,219	0,226	0,231	0,767
Fixed assets	19,394	57,758	63,985	52,549	84,687
Construction in progress	1,702	2,324	2,933	3,629	3,181
Other non-current assets	0,403	0,836	1,115	2,835	1,582
<b>Total Assets</b>	<b>65,893</b>	<b>101,633</b>	<b>122,682</b>	<b>116,873</b>	<b>149,939</b>
Short-term borrowings	0,112	0,055	0,016	-	0,064
Trade accounts payables	4,112	19,694	22,428	19,832	18,591
Other accounts payables	25,079	9,868	16,932	20,187	25,739
Long-term borrowing	4,668	33,401	39,018	30,403	33,884
Other liabilities	0,052	0,065	1,168	1,183	0,700
<b>Total liabilities</b>	<b>34,024</b>	<b>63,083</b>	<b>79,561</b>	<b>71,605</b>	<b>78,978</b>
Paid-in capital	15,046	24,473	30,681	29,189	28,483
Retained earnings	-	0,909	-	-	-
Other funds and reserves	16,824	13,168	12,439	16,079	42,477
<b>Shareholders equity</b>	<b>31,869</b>	<b>38,550</b>	<b>43,120</b>	<b>45,268</b>	<b>70,960</b>
<b>Total Resources</b>	<b>65,893</b>	<b>101,633</b>	<b>122,682</b>	<b>116,873</b>	<b>149,939</b>

Source: PTSC, VinaCapital



such as storms, tsunamis, and earthquakes, which impact not only PTSC's operations but also on its customers'.

### Political risk

The Government retains tight control on oil and gas exploration and exports. Oil and gas is not only a product of but also a tool for macroeconomic adjustment. Policy changes will have considerable effects on the industry.

### Market risk

Nearly 100% oil production of Vietnam is exported. Vietnam's oil industry is directly linked to the world market. Changes in the oil price have a big influence on PTSC down the line.

In the years to come, when PTSC becomes active internationally, strong competition from other companies will have a big effect on the company's returns.

### Management risk

Most of machinery and equipment are imported, while oil production is exported. The FX fluctuation has a double influence on Vietnam's oil industry, including PTSC.

Moreover, with the participation of foreign companies who have better human resource strategies, skilled workers (mainly at the middle level) will go to work for foreign companies. PTSC could face that problem and face difficulties finding human resources. This could have a big effect when PTSC goes global.

## Valuation Models Analysis

### Earnings model

The earnings model is based on the free cash flow of the next ten years (2006 to 2016). After processing the forecasted financial statements, the FCFE is discounted at the cost of equity of 12% to get the present value of equity of US\$113,148,000 and the intrinsic value of US\$1.13 or VND18,104 per share.

### Valuation by multiples approach

For our relative valuation approach, we use the P/E ratio and the P/B ratio of comparable companies both in Vietnam and the region. We compiled a list of eight comparable

companies and calculated their aggregate average P/E ratio and P/B ratio.

- In Vietnam, PV Drilling Company and Drilling Mud Company are in the same oil industry. PV Drilling specializes in drilling and work-overs, well services, tools and equipment supplies, inspection and workshop services, manpower provision, oil spill response services, and other oilfield related services. PV Drilling has performed well compared to other companies in the same industry. PV Drilling is rather well-known and traded daily in the OTC market.

For regional companies, we have selected six companies based on their range of services (mainly focusing on oil equipment and services supplied) and market caps (50% bigger or smaller than that of PTSC).

- KNM Group Berhad is a Malaysia - based investment holding company that is engaged in the provision of management services. The Company has two directly held subsidiaries. KNM Process Systems Sdn. Bhd. is engaged in the design, manufacture, assembly and commissioning of process equipment, pressure vessels, heat exchangers, skid-mounted assemblies, process pipe systems, storage tanks, specialized structural assemblies and module assemblies for the oil, gas and petrochemical industries. KNM International Sdn. Bhd. is engaged in the provision of management, technical advisory, licensing and trademark services to companies with international operations or companies with international investments.
- Enric Energy Equipment Holdings Limited is an investment holding company. It has three segments: the design, manufacture and sale of compressors; the design, manufacture and sale of pressure vessels, and the provision of integrated business solutions, from the design and manufacture of gas equipment system to onsite installation. The Company's subsidiaries include Enric Investment Group Limited, Enric Compressor, Enric Anhui Investment Limited, Enric Shijiazhuang Investment Limited, Enric Gas Equipment, Enric Langfang Investment Limited, Enric Integration and Beijing Enric Energy Technologies Limited.

Chart 11 - Summary of FCFE Valuation Model

### Summary of FCFE Valuation Model

Cost of Equity	12%
Growth factor	8%
Discounted Factor	12%
Discounted cash flow	-93,674
Terminal Value	276,321
<b>Total discounted cash flow</b>	<b>182,647</b>
Total debt	33,884
<b>NPV net of debt</b>	<b>148,763</b>
No. of share outstanding (mm)	100

Source: VinaCapital

- Wah Seong Corporation Berhad is an investment holding company. Through its subsidiaries, the Company is engaged in five business segments: oil and gas, which comprises pipe coating services, manufacturing, supply and installation of sacrificial anodes, provision of cathodic and corrosion protection services and provision of all kinds of services related to the oil and gas industry. Infrastructure, which is engaged in manufacturing of spiral welded pipes. Industrial engineering, which is engaged in designing, fabrication, installation and commissioning of tanks, pressure vessels, piping and processing equipments and manufacturing and distribution of replacement parts for palm oil mills and refineries. Building materials, which is engaged in marketing and distribution of building materials and installation services of metal roofing. The others segment consists of investment holding and property holding.
- Shandong Molong Petroleum Machinery Co. is principally engaged in the design, manufacture and sale of oil well pumping machines, oil well sucker rods, oil well pumps, oil well pipes, casing and other petroleum exploitation machinery accessories. The Company's customers are mainly oil fields of the subsidiaries or branches of PetroChina Company Limited (PetroChina) and China Petroleum & Chemical Corporation (Sinopec), including Daqing Oil Field, Shengli Oil Field, Xinjiang Oil Field, Zhongyuan Oil Field and Liaohe Oil Field. It has two subsidiaries, Weifang Molong Drilling Equipment Company Limited, which is engaged in the manufacture and sale of petroleum extraction machinery, and Molong (Asia) Holding Limited, which is engaged in the trading of petroleum extraction machinery and electro-mechanical equipment.
- Petra Perdana Berhad, through its subsidiaries, is an integrated service provider for the upstream oil & gas industry, focusing primarily on integrated brown field and marine services. It provides oil field optimization, information technology services, retrofit, marine services, seismic data acquisition, design and fabrication of processed equipment, packaging, and supply of engineered equipment. The Company, through Petra Perdana Bhd, also provides specialist services for the petrochemical and related industries. During the year ended December 31, 2005, the company has acquired three subsidiary companies, namely Ampangship Marine Sdn Bhd, Pelangi Mitra Offshore Pte Ltd and Portfolio Hitech Sdn Bhd. On 28 February 2005, the subsidiary of the Company, Petra Asia Limited entered into a joint venture agreement with PT Mulia Graha Abadi. On 31 March 2005, the Company completed the proposed acquisition of Ampangship Marine Sdn Bhd and Pelangi Mitra Offshore Pte Ltd.
- SapuraCrest Petroleum Berhad is an investment holding company. It provides management services to its subsidiaries. The Company operates in four segments: Installation of pipelines and facilities, involved in installation of offshore platforms and marine pipelines; Offshore oil and gas drilling, involved in drilling of offshore oil wells and chartering of rigs involved in drilling of offshore oil wells; Marine services, engaged in providing offshore geotechnical and geophysical services to the oil and gas industry, development of marine technology and marine chartering, and Operations and maintenance, involved in repairs and refurbishment of industrial gas turbines, supply, installation, commissioning and maintenance of point-of-sale systems for petrol stations and asset management services for offshore installations. On

Chart 12 - Comparable Valuation Approaches

Company	Stock Exchange	Market Cap	P/E	P/B
PV Drilling	Vietnam	212.5	58.82	5.00
Drilling Mud	Vietnam	11.98	11.76	1.59
<b>Average Vietnam</b>			<b>35.29</b>	<b>3.29</b>
<b>20% Discounted - Vietnam</b>			28.23	2.64
KNM Group Berhad	Malaysia	353.9	32.06	8.13
Enric Energy Equipment Holdings Ltd	HongKong	269.0	21.48	5.29
Wah Seong Corporation Berhad	Malaysia	228.1	19.49	2.50
Shandong Molong Petroleum Machinery	HongKong	203.3	19.05	3.95
Petra Perdana Berhad	Malaysia	190.9	17.27	3.95
SapuraCrest Petroleum Berhad	Malaysia	187.9	11.83	1.44
<b>Average Region</b>			<b>17.31</b>	<b>3.61</b>
<b>20% Discounted - Region</b>			<b>13.85</b>	<b>2.89</b>
<b>AGGREGATE AVERAGE</b>			<b>21.04</b>	<b>2.76</b>

Source: Reuters, VinaCapital

Chart 13 - Consolidated Valuation

Approaches	Price per share	Weighted (%)	Weighted Value
DCF Approach	23,802	50%	11,901
PE Approach	34,879	25%	8,720
PB Approach	30,838	25%	7,710
<b>Weighted Value per Share</b>		<b>100%</b>	<b>28,330</b>

Source: VinaCapital

August 30, 2005, the Company had announced that it's wholly owned subsidiary, Nautical Essence Sdn. Bhd., entered into a cooperation agreement with Acergy MS Ltd.

We apply a discount rate of 20% to each comparison due to differences in financial health, company prospects, and share marketability.

Aggregate average is the mean of the two values from Vietnam and the region.

### Consolidated Valuation

Because the results of the approaches are differently reliable, we put different weight to the results to obtain the weighted-average of the share valuations. As the discounted cash flow is based on more reliable facts and assumptions, we allocate a weight of 50% to its result. The weight of comparable P/E ratio method and P/B ratio method are 25%.

**The fair value per share of PTSC is thus estimated at VND 28,330.**

### IV. SENSITIVITY ANALYSIS

As the projection is demand-driven, the key variable for sensitivity analysis is sales. We attribute differences in growth rate to the projected sales figures and then analyze the changes in the net income, EPS and share value according to the achievement level of our projection.

The result shows that share price is not elastic to changes in sales. Moreover, the elasticity against the achievement level in the downside scenario is less than the elasticity in the upside one. The findings indicate that the gain of the acquisition is greater than its loss in the opposite case.

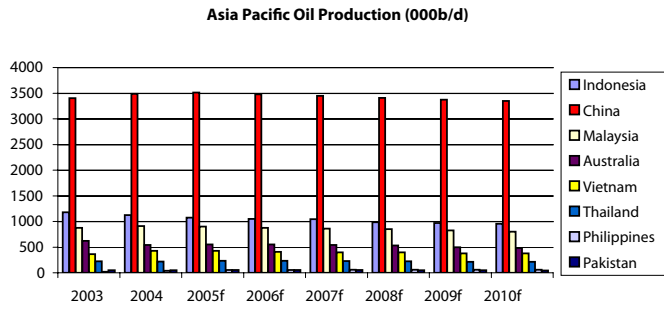
Similarly, the elasticity of net income and EPS against changes in sales growth rates is also calculated. The results imply small elasticity of the expected sales growth rates against changes in these variables.

Chart 14 - Sensitivity Analysis

Items	Downside				Base case	Upside			
	8%	9%	10%	11%		12%	13%	14%	15%
Sales growth	8%	9%	10%	11%	12%	13%	14%	15%	
Sales (US\$ '000)	216,339	218,342	220,345	222,348	224,352	226,355	228,358	230,361	
Change from base case	-4%	-3%	-2%	-1%	-	1%	2%	3%	
Net income (US\$ '000)	12,829	13,156	13,483	13,810	14,137	14,464	14,791	15,118	
Change from base case	-9%	-7%	-5%	-2%	-	2%	5%	7%	
Elasticity	0.10	0.08	0.05	0.03	-	0.03	0.05	0.08	
EPS (VND)	1,283	1,316	1,348	1,381	1,414	1,446	1,479	1,512	
Change from base case	-9%	-7%	-5%	-2%	-	2%	5%	7%	
Elasticity	0.10	0.08	0.05	0.03	-	0.03	0.05	0.08	
Price (VND)	15,482	17,406	19,432	21,563	23,802	26,154	28,132	30,704	
Change from base case	-35%	-27%	-18%	-9%	-	10%	18%	29%	
Elasticity	0.38	0.30	0.20	0.11	-	0.11	0.21	0.34	

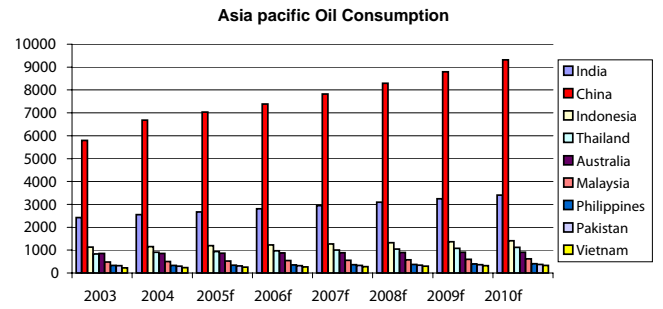
Source: VinaCapital

**APPENDIX 1A: Asia Pacific Oil Production**



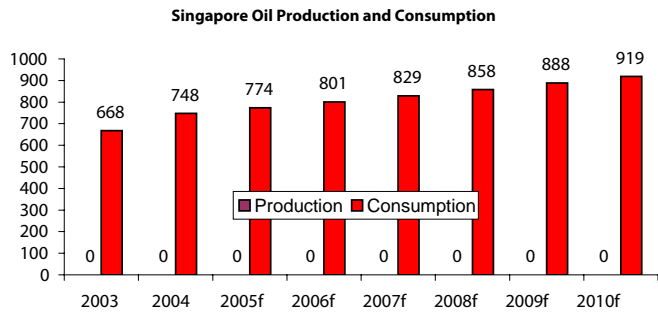
Source: BMI

**APPENDIX 1B: Asia Pacific Oil Consumption**



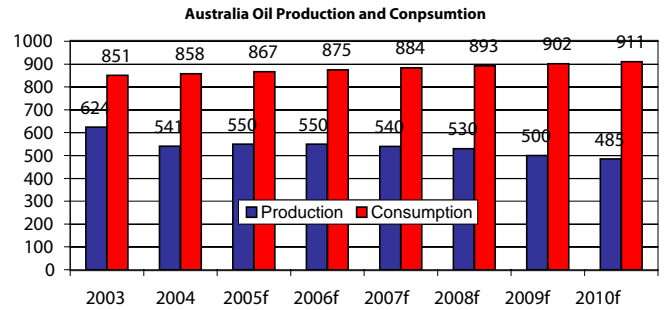
Source: BMI

**APPENDIX 2A: Regional Oil Production and Consumption**



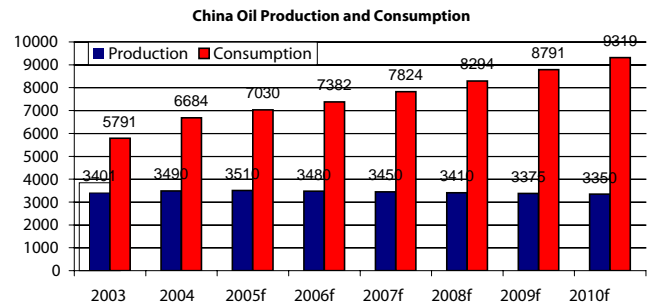
Source: BMI

**APPENDIX 2B: Regional Oil Production and Consumption**



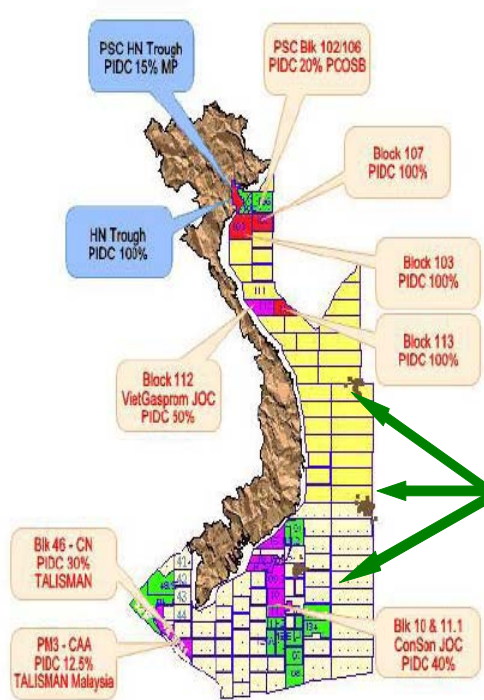
Source: BMI

**APPENDIX 2C: Regional Oil Production and Consumption**



Source: BMI

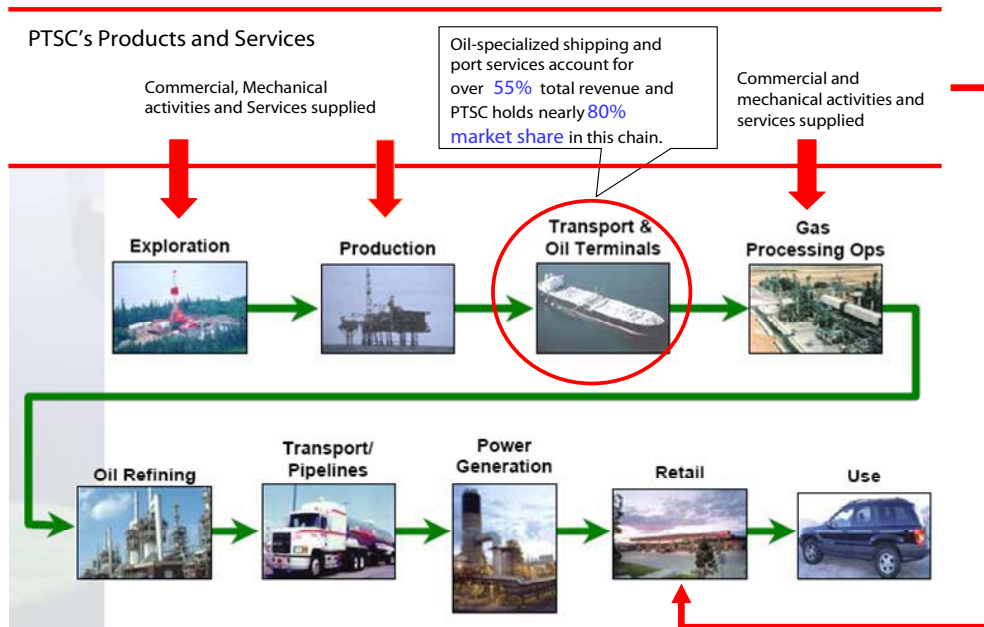
**APPENDIX 3: Vietnam Oil Map**



Only 25-30% of the country's continental shelf with hydrocarbon potential has been awarded to over 50 foreign oil and gas companies, with a total investment of about US\$4 billion. The remaining areas (70-75%) with water depths of 200m or more, are unexplored and open for new bidding.

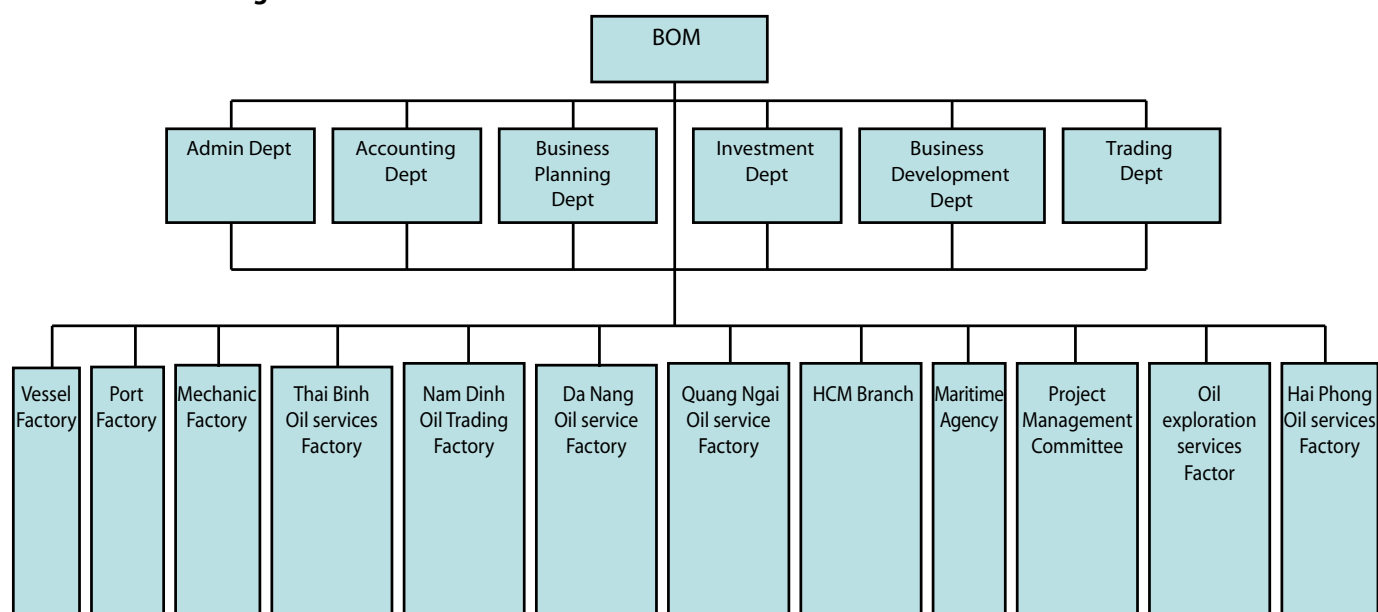
Source: IBS

**APPENDIX 4: PTSC's Business Model – Value Chain Analysis**



Source: VinaCapital, Internet

**APPENDIX 5: PTSC Organization Chart**



Source: PTSC

**APPENDIX 6: PTSC's Performance**

<b>Ratios</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005E</b>	<b>2006E</b>	<b>2007E</b>	<b>2008E</b>	<b>2009E</b>	<b>2010E</b>
<b>Efficiency ratios</b>									
- Assets turnover	2.25	1.92	1.24	1.49	1.16	0.84	0.66	0.64	0.70
- Inventories days	25.78	17.95	20.29	39.10	51.24	51.24	51.24	51.24	51.24
<b>Financing ratio</b>									
- Assets to Equity	2.64	2.85	2.58	2.11	1.75	4.29	5.24	5.01	4.79
<b>Profitability ratios</b>									
- Profit margin	4.1%	2.9%	4.3%	5.3%	6.3%	6.9%	6.4%	6.9%	7.3%
- ROA	9.4%	5.5%	5.3%	7.9%	7.3%	5.8%	4.3%	4.4%	5.1%
- ROE	24.2%	15.8%	14.6%	18.6%	14.1%	16.4%	21.3%	23.4%	25.6%
- Estimated Dividend Rate					12%	14%	16%		

Source: VinaCapital

**APPENDIX 7: Projected investment in Oil and Gas Industry for the 2001 – 2010 period**

<b>Investment Projects</b>	<b>Total Investment</b>	<b>PV's Funding</b>		
		<b>US\$m</b>	<b>Value US\$m</b>	<b>2001-2005</b>
Exploration	3,950 - 1,150	900 - 1,100	125 - 525	175 - 575
Field development & production	6,120 - 7,020	1,945 - 4,265	1,017 - 1,177	928 - 1,135
Gas collection and transport	1,399	853	591	263
Total investment in offshore operation	11,469 - 12,569	3,698 - 4,265	2,033 - 2,293	1,666 - 1,973
Overseas oil exploration & production	550 - 700	225 - 600	150 - 250	75 - 350
Petroleum processing	5199	3,132 - 3,232	1,582 - 1,662	1,550 - 1,570
Petroleum products and distribution & sales	1,319 - 1,369	1,319 - 1,369	457 - 477	862 - 892
Petroleum services & trading	819	819	423	396
<b>Total investment</b>	<b>19,356 - 20,656</b>	<b>9,193 - 10,205</b>	<b>4,645 - 5,105</b>	<b>4,548 - 5,181</b>

Source: PetroVietnam

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