

PP

## Singapore CA Qualification Examination

### INTEGRATIVE BUSINESS SOLUTIONS

# ADVANCE INFORMATION

**Monday, 15 Nov 2021**

This is a hypothetical case written exclusively for this examination. Names, characters, places and incidents used are imaginary or fictional. Any resemblance to actual events or locales or persons, living or dead, is entirely coincidental. This case is not to be cited without permission from the Singapore Accountancy Commission.

### **WARNING**

Candidates **must not under any circumstances** contact any similar company or its agents to obtain research data, and they must use **ONLY PUBLICLY AVAILABLE INFORMATION**. Under no circumstances should they seek to use unpublished or private information.

Dear Candidate,

This information package contains the **Advance Information** for the Integrative Business Solutions (IB) module final examination to be held on **Monday, 6 Dec 2021**. A checklist of the documents (Exhibits) contained in this information package is provided on the following page. It is your responsibility to ensure that you have received every document listed.

Your task now is to familiarise yourself with this information including analysing the data provided. In addition, you are encouraged to undertake further research to form a holistic picture of the industry and markets in which the case study company is operating, and the general economic and business environment. Diligent preparation is essential for success in the IB Examination. **Guidance on preparing for the IB Examination is covered in your IB Toolkit.**

**The IB examination will be conducted using Cirrus.** Please download this Advance Information to the hard drive on your laptop and print this Advance Information prior to the examination day. Although you will have full access to the hard drive on your laptop during the examination, you are strongly advised to have your notes and other preparatory workings in **hard copy format**, as well as a standalone calculator that complies with the SAC's regulations for your examination.

You will also receive additional information (**Examination Day Documents**) on the case study company on the day of the IB Examination. The Examination Requirements will be included within Cirrus. Follow the instructions in Cirrus to download the Examination Day Documents. You are not allowed to print the Examination Day Documents on the day of examination. The Examination Day Documents complete the case study scenario and set out the requirements for the report that you are required to write. The IB Examination will be an open-book examination of **4 hours 30 minutes** duration. Your formal report will cover four specified areas, one of which will be to write an Executive Summary. Please note that **only your report commentary (including the assumptions made), appendices, and workings entered in Cirrus on the day of the examination will be marked.**

## Red Dot Petroleum

### Advance Information – List of Exhibits

Exhibit	Exhibit Title	Start Page
<b>Advance Information (AI)</b>		
1	Red Dot Petroleum origins, company background, and segmental financial information	AI-4
2	Summary of the Singapore Oil Industry – industry article	AI-10
3	Summary consolidated management accounts 2018 – 2020	AI-18
4	Newspaper article: The Hin Leong Scandal	AI-25
5	Extract: Minutes of Board meeting held on 7 November 2021	AI-27
6	Newspaper article on alternative energy	AI-29
7	Briefing note: Corporate Social Responsibility and Integrated Reporting	AI-32
8	Transcript of interview between Ryan Tan and Max Teo of Singapore Oil and Gas Consultants ('SOG') on 1 December 2021	AI-34
9	Financial information for the New Basin oil production activities of Red Dot Petroleum	AI-37
10	Suggestions for further research and reference list	AI-38

Note: Unless otherwise stated, all dollar amounts (\$) are in Singapore dollars.

**Red Dot Petroleum origins, company background, and segmental financial information****INTRODUCTION**

Founded in Singapore in 1968 as an oil trader, Red Dot Petroleum (Red Dot) is a fully integrated oil and gas company with its headquarter at the Port of Singapore. The company is listed on the Singapore Exchange. Red Dot is a regional leader in oil and gas exploration, production, refining, storage and distribution, as well as in the trading of crude and refined petroleum products.

**BUSINESS BREAKDOWN****1. Exploration and Production**

Having branched into offshore exploration in 2005, Red Dot has six Asia-Pacific assets in its upstream portfolio — in Indonesia, Cambodia and Vietnam — with plans to acquire more in the Asia-Pacific region while continuing to explore the potential of existing sites. With natural gas playing a significant and growing role in regional energy demand, Red Dot has interests in five cross-border gas pipelines in the emerging Trans-Asean Gas Pipelines (TAGP) network. The majority of crude oil produced by Red Dot is used by the refinery, with the rest being sold externally. All natural gas is sold externally.

**2. Refining**

Red Dot has a 30 per cent interest in the Singapore Refining Company's refinery that can process 200,000 barrels of crude oil per day and produce high-quality gasoline products while being 100 per cent energy self-sufficient. Refined fuel products are traded through an extensive regional and international network.

**3. Storage and distribution**

Red Dot's highly automated, 180,000-cubic-metre storage terminal at Jurong Island is equipped with a deep-water wharf to accommodate tankers with displacement of up to

160,000 tonnes. The terminal supports Red Dot's marine bunker operations and trading in oil and refined products, and its government-accredited laboratory performs quality assurance tests around the clock.

Natural gas is stored in a variety of locations, mainly using underground storage reservoirs, close to pipeline inlets.

Lubricants are stored at the Jurong Island Terminal, mainly in warehouses.

#### **4. Products and Services**

Other than the sale of unrefined crude oil, the company also sells the following product groups which are produced by the refinery:

##### **4a. Aviation & Marine**

Red Dot provides high-quality, competitively priced jet fuels to more than 20 airlines at international and domestic airports in the region, including Bangkok's Suvarnabhumi Airport and Singapore Changi Airport. Red Dot is also a leading supplier of bunker fuel to international shipping companies and to vessels passing through the Port of Singapore.

##### **4b. Commercial & Industrial**

Red Dot is a bulk supplier of automotive diesel oil, marine gas oil, gasoline and liquid petroleum gas to local and regional transportation companies, power stations and the industrial and manufacturing sectors. Marine gas oil is sold on an ex-wharf basis to barging companies and on a delivered basis to offshore islands.

##### **4c. Trading**

Red Dot trades in both crude oil and refined products such as gasoline, jet fuel, fuel oil and naphtha through a regional and international network extending across Southeast Asia, South Asia, the Middle East and Australia.

#### 4d. Lubricants

Red Dot's extensive range of branded lubricants in the automotive, industrial and marine sectors include passenger car motor oils, heavy-duty diesel engine oils, motorcycle oils, compressor oils, refrigeration oils, heat transfer oils, hydraulic oils, turbine oils, metalworking fluids, outboard motor oils and multi-purpose greases.

#### 5. Segmental performance analysis

Recent performance by segment is summarised as follows:

	2020		2019	
	<i>Revenue</i>	<i>Gross profit</i>	<i>Revenue</i>	<i>Gross profit</i>
	<i>\$'million</i>	<i>\$'million</i>	<i>\$'million</i>	<i>\$'million</i>
Crude oil	939	(607)	1,823	691
Natural gas	172	(111)	191	71
Aviation and marine	137	(7)	359	32
Commercial & industrial	538	(70)	1,411	31
Lubricants	10	3	27	10
Trading	0	(17)	0	94
Intra divisional sales	(644)		(1,563)	
Total external sales	1,152	(809)	2,248	929

Intra divisional sales relate to the sale of crude oil by the exploration and production division to the refinery division.

#### ORGANISATIONAL STRUCTURE

Red Dot operates a matrix structure, with products and service divisions forming one dimension, and storage/distribution, refining, and exploration/production forming the second dimension. In addition, finance and human resources are centrally organised functions that operate as shared service centres for the divisions.

## BOARD MEMBERSHIP AND SENIOR MANAGEMENT

### Key Board roles include:

Ryan Tan – CEO	Ryan has been CEO of Red Dot for 5 years. Prior to that he was head of Exploration and Production for a regional competitor. He has worked in the Oil and Gas industry for 30 years, and has an MBA (Energy and Clean Technology) from the University of California, Berkeley.
Wayne Lin – Chair	Wayne has been the Chair of the Red Dot Board for 6 years. He has extensive commercial experience in the oil and gas industry, having been an Executive Marketing Director for global oil companies for most of his career.
Nicole Chong – Finance Director	Nicole is a Chartered Accountant of Singapore with extensive listed company experience. She has been responsible for many capital-raising programmes including several IPOs in Singapore and overseas.

Eight other non-executive Directors form the nomination, remuneration and audit committees.

### Other senior management team members include:

Darren Sim – Human Resources Director

Haruka Wang – Aviation and Marine Director

Lyana Li – Commercial and Industrial Director

Sean Lim – Trading Director

Daniel Tang – Lubricants Director

Roy Chan – Storage and Distribution Director

Ken Lau – Refining Director

Jing Yi Zhang – Exploration and Production Director

## **DIRECT COMPETITION**

### **Singapore Petroleum Company Ltd**

Founded in 1969, Singapore Petroleum Company (SPC) is now a subsidiary of Chinese state-owned company PetroChina. Like Red Dot, it is a fully integrated petroleum company involved in exploration and production, refining, trading and petroleum product distribution. It is currently active in the exploration of upstream assets in Vietnam, Cambodia, Australia, China and Indonesia. In partnership with Caltex, SPC has a 50 per cent interest in the Singapore Refining Company's refinery.

### **International mega-refineries**

Mega-refineries are being built in China, India and South Korea, and are set to present Singapore refining operations with increased competition in Asia.

There are also many other, smaller competitors in Singapore that compete in individual segments of the Red Dot business.

## **FUTURE DIRECTION**

---

### **FINANCIAL TRANSPARENCY**

Partly in response to the Hin Leong scandal, in 2021 Red Dot recommits to financially transparent behaviour in Singapore and all countries of operation to increase confidence among the public, employees and investors, in collaboration with Enterprise Singapore, the Maritime and Port Authority of Singapore and the Monetary Authority of Singapore.

This will also be encouraged throughout the supply chain, and insisted upon wherever possible.

### **A SUSTAINABLE FUTURE**

The global oil and gas industry was already facing challenges related to climate change, market demands for alternative energy sources, and the emergence of disruptive technologies before 2020. The pandemic has accelerated the need to meet those challenges. Singapore aims to be at the forefront in clean energy solutions, and the transition is already underway.

In January 2021, rig-builder Keppel Corporation announced that it would transition away from its rig-building business and pivot to engineering for clean energy. Hyundai recently announced a US\$295m investment to build an electric vehicle manufacturing facility in Singapore, capable of manufacturing 30,000 electric vehicles a year when completed at the end of 2022.

While Singapore's carbon emissions are relatively inconsequential at just 0.1 per cent of the global total, its reputation as a respected global partner offers an opportunity to steer regional and global cooperation on clean energy.

As a result, Red Dot has an extensive programme of corporate social responsibility, and a strong commitment to building a sustainable business fit for the future.

## **GOVERNMENT SUPPORT**

Red Dot will work closely with the government to support the industry's transition and be active in designing sector-specific and cross-sector policies to drive effective change.

Policies and changes to current policies — such as the recent enhancements to Singapore's Energy Conservation Act — will help shape the behaviour of businesses and consumers towards greener products and services. Recent successes include the mandatory energy management practices introduced in 2013 to ensure companies monitor, manage and mitigate energy loss and greenhouse gas emissions, saving 250 kilo-tonnes of CO2 equivalent from 2014 to 2018.

Red Dot will actively support Singapore's new Green Plan, a major government policy priority introduced in February 2021.

**END OF EXHIBIT 1**

**Summary of the Singapore Oil Industry – industry article****Industry analysis: Singapore Oil and Gas**

 A photograph of an offshore oil rig at sunset. The rig is silhouetted against a bright orange and yellow sky. The sun is a large, glowing orb on the left side of the frame. The rig has several cranes and a central derrick. The water is dark and calm.	<h1>Black Gold?</h1> <p><b>The past, present and future of the Singapore oil and gas industry</b></p> <p><i>9 June 2021</i></p>
--	---

Despite having no oil or gas resources to extract of its own, Singapore is one of the world's top three oil trading and refining hubs with a total crude oil refining capacity of 1.5m barrels per day (bbl/d), making the country one of the top 10 exporters of refined products in Asia.

In addition, Singapore is the market leader for high-end floating production, storage and offloading solutions and jack-up rigs, as well as the regional headquarters for key players in that sector, including the world's two largest rig builders, SembCorp Marine and Keppel Corporation.

Moreover, Singapore is a leading oil and gas equipment and services hub in Asia, hosting more than 3,000 established marine and offshore engineering firms, including Baker Hughes, Halliburton, National Oilwell Varco, Schlumberger and TechnipFMC. Singapore is also home to the world's largest bunkering port.

Can this success story continue, or will green energy finally put an end to the black gold rush?

## **HISTORY**

The petroleum industry in Singapore dates back to 1891, when the offshore island of Pulau Bukom was used to store kerosene for M Samuel & Co of London, which was importing the fuel in bulk from Russia for distribution in Asia.

By the late 1950s, when global petroleum giant Royal Dutch Shell chose to establish its new refinery at Pulau Bukom, Singapore was already the biggest oil storage, blending, packing and bunkering base in Southeast Asia, and among the largest in the world, largely thanks to its strategic location at the crossroads of international shipping lanes between the Indian and Pacific oceans.

Shell's US\$30m refinery was officially opened in 1961. By offering generous tax incentives to attract new enterprises and encourage existing ones to expand, Singapore went on to develop world-class storage and trading infrastructure, becoming a price-discovery hub for oil-related commodities and "the undisputed oil hub in Asia".

## **SECTOR ORGANISATION**

The government-owned Singapore National Oil Corporation oversees the governance and protection of the country's petroleum industry, which today is centred on Jurong Island. Like nearby Pulau Bukom, Jurong Island is located off Singapore's south coast, with more than 90 petroleum organisations located there.

Singapore's three main refineries are ExxonMobil's 605,000-bbl/d facility on Jurong Island, Royal Dutch Shell's 500,000-bbl/d refinery on Pulau Bukom and the Singapore Refining Company's 200,000-bbl/d facility on nearby Pulau Merlimau.

## **VALUE TO SINGAPORE**

The petroleum industry contributes approximately five per cent of Singapore's GDP. Output from the oil and gas and petrochemical industries was valued at US\$60bn in recent years, but that figure is expected to decrease due to fluctuating oil prices, the impact of Covid-19 and geopolitical issues.

As a global financial hub, Singapore provides for 25 to 35 per cent of commodities trading in Asia, according to Enterprise Singapore, a government agency. It is also Asia's largest physical oil trading hub.

## **GOVERNMENT POLICY**

Over the last 50 years, Singapore's domestic energy sector moved from oil to natural gas for cleaner power generation, together with an increasing use of solar energy. As one of the Asia-Pacific's most progressive countries with regard to environmental standards, other regional countries follow its example and that is expected to be the case in their fuel consumption trends.

Today, about 95 per cent of Singapore's electricity is generated using natural gas, which will remain the dominant fuel in the near future. The other 5% is generated using coal, oil, municipal waste and solar. Singapore is limited in terms of cost effective and reliable renewable energy resources.

Expansion of Singapore's existing LNG terminal costing more than US\$500m is in progress as the country aims to become a hub for natural gas trading and trans-shipment in Asia. The expanded terminal will be able to handle 12 billion cubic metres of LNG per year.

Regarding solar, Singapore achieved its 2020 target of 350 megawatt-peak (MWp) in the first quarter. In the longer term, it is working towards achieving at least 2 gigawatt-peak (GWp) by 2030, and an energy storage deployment target of 200 megawatts beyond 2025.

Sembcorp Industries Singapore-based subsidiary has been selected to build the largest floating photovoltaic (PV) solar energy plant in the Southeast Asian state, standing at 60MW on Tengeh Reservoir. This reservoir in western Singapore is already the world's largest testbed for floating PV led by research institute SERIS, which also held the first global conference on the emerging technology. Facebook has signed a Power Purchase Agreement with Singapore energy company Sunseap Group to build and use solar panels on the rooftops of 1,200 public housing blocks and 49 government buildings.

## **IMMEDIATE CHALLENGES**

---

Asia's developing economies are highly dependent on oil imports and are less energy-efficient than most industrialised countries. With rising populations, steady growth of the middle class and the continuing trend towards urbanisation in the region, analysts predict

that regional prospects for Singapore's gas and oil sector are positive in the longer term. But immediate challenges lie ahead.

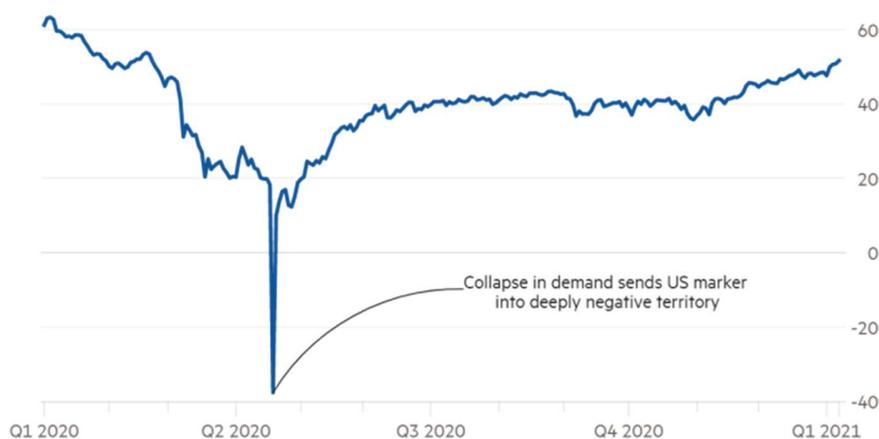
## **VOLATILE OIL PRICES**

Saudi Arabia announced oil price discounts in March 2020, initiating a price war with Russia and the price of oil becoming briefly negative in April over storage fears. To relieve the storage pressure, OPEC+ reached a deal to reduce crude production in May and June. During May, prices soared nearly 90 per cent to US\$35 a barrel. June and July prices held fairly steady at about US\$40 a barrel as OPEC+ agreed to extend production cuts to the end of July. In January 2021, US crude oil prices breached US\$50 a barrel spurred by Saudi Arabia's promise of a hefty production cut.

Uncertainties around Covid-19-induced demand shocks continue.

US oil prices top \$50 after latest Opec+ deal

West Texas Intermediate, \$ per barrel



Source: Refinitiv  
© FT

## **IMPACT OF THE HIN LEONG SCANDAL**

The volatility in oil prices, depressed demand for oil products internationally and the reluctance of banks to extend credit to commodity traders accelerated the 2020 collapse of Hin Leong Trading Pte Ltd, one of the largest oil trading companies in Singapore. Hin

Leong filed for bankruptcy protection in mid-April 2020 to restructure debts of nearly US\$4bn.

### **1. Tightened credit lines**

The court filing in the Hin Leong case revealed that the company had hidden years of trading losses. As a result of its collapse and oil price volatility, banks and trading companies scaled down their activities in Asia, tightening credit lines in commodity financing.

### **2. Perception of the Singapore industry**

The impact of Hin Leong's collapse has also dealt a blow to the international perception of Singapore's oil and gas industry, damaging its reputation for integrity and financial probity. Singapore maintains that its oil trading industry is resilient despite Hin Leong's collapse, but investor confidence has been damaged.

## **IMPACT OF THE PANDEMIC**

According to Deloitte, global oil demand fell by 25 per cent in April 2020 compared to the previous month but rebounded sharply, cutting its losses to 8 per cent. Oil demand was expected to recover in 2021 but remain lower than it was pre-pandemic. Covid-19 and the oil downturn have accelerated long-term trends in the industry, such as the transition to new energy sources and digital transformation of operations.

### **1. Aviation sector demand**

Aviation activity collapsed in 2020, and its expected recovery is seen as one of the main factors influencing the 2021 oil demand growth. International Energy Agency data shows that almost 10 per cent of total oil demand in OECD countries was for jet fuel in 2019, dropping to 6 per cent in 2020. Hopes of a speedy aviation recovery in 2021 have been hampered by travel restrictions after the emergence of new coronavirus variants and a slower than expected vaccination rollout in many countries.

## **2. Demand for products and services internationally**

Global lockdowns and closure of workplaces have seen demand for fuels and oil products and services fall internationally. According to Deloitte, the top 12 countries that had been or were under lockdown — ranging from 6 to 12 weeks — by June 2020 were the countries traditionally responsible for more than 60 per cent of crude oil demand.

## **3. Storage of inventories**

### **3a. Onshore**

The cost of storing fuels in Singapore surged in 1H 2020 as onshore tanks swelled to near capacity amid crashing demand, climbing at least 38 per cent by April with no more new leases being offered.

Storage in Singapore was at over 70 per cent capacity in mid-February 2020. By April, the cost of renting short term storage was US\$6.90 to US\$9.40 a cubic metre per month, compared with US\$5 to US\$6.30 at the end of January.

At the start of 2021, rising prices and demand optimism are spurring an unwinding of storage contracts. By the end of February, the volume of refined products held on stationary tankers for over 10 days stood at 19.2m barrels, down 77 per cent from a peak of 84m in May 2020, IHS Markit estimates showed. The threat of new coronavirus variants remains, however.

### **3b. Offshore**

The record level of onshore oil product inventories in Q2 2020 led to a surge in floating storage and resulted in a huge spike in shipping rates for oil-related commodities. Shipping rates for jet fuel nearly trebled in a month, from US\$3.50/bl to US\$9.60/bl on the Mideast Gulf to Singapore route, even as jet fuel prices crashed.

## **ATTITUDE TO FOSSIL FUELS**

Public and government attitudes to fossil fuels internationally — and especially in developed nations — are becoming less positive as climate change gains prominence and urgency. A 2020 international survey by Pew Research Centre, however, found that natural gas was still viewed relatively positively.

The survey — conducted in the US, Brazil, Russia, Germany, Singapore and other countries in Europe and Asia — showed that sixty-nine per cent of adults across 20 countries favoured expanding the use of natural gas in contrast to those expressing support for oil (39 per cent). It also demonstrated overwhelming public support for renewable sources, with 93 per cent supporting more solar power, and 87 per cent expressing positive sentiment for wind power.

## **DISRUPTIVE TECHNOLOGIES**

Digitisation was expected to play a key role in effective energy transition strategies in 2021. As well as enabling remote operations and driving human-machine collaboration, digitisation has an important role to play in setting near-term emissions targets, using standardised and credible reporting, and tracking accountability through the supply chain.

### **1. Robotics and Artificial Intelligence**

Oil and gas companies internationally are already employing robotics and artificial intelligence to boost their efficiency and productivity, most notably in their exploration operations.

In 2018, ExxonMobil partnered with the Massachusetts Institute of Technology to design robots for ocean exploration, improving its natural oil seep detection capabilities. In November 2019, Microsoft began collaborating with Baker Hughes and artificial intelligence developer C3.ai to bring artificial intelligence technology to the energy industry via its Azure cloud computing solution. That same year, BP invested US\$5m in the Houston-based technology start-up Belmont Technology. BP will feed geology, geophysics, reservoir and historic data to a cloud-based platform to identify new connections and workflows.

Analysts believe that the impact of the pandemic will accelerate the oil industry's inevitable transition to artificial intelligence technologies.

### **2. Autonomous vessels**

Singapore is already active in exploring the potential of autonomous vessels, with the Maritime and Port Authority of Singapore carrying out small-scale pilots to support the

development of three autonomous tugs. These aim to enable operators to enhance productivity and navigational safety at the Port of Singapore.

Industry-leading rig builder Keppel Corporation, headquartered in Singapore, is also currently building and refining autonomous solutions. Singapore's oil and gas industry foresees autonomous vessels as being key to future upstream exploration, including Red Dot's assets in Indonesia, Cambodia and Vietnam.

## **CONCLUSION**

Asia's energy infrastructure is set to depend on oil and gas for the medium to long term, however public (and so political) attitudes are hardening when it comes to the impact fossil fuels have on the environment. Whether the industry can adapt to the demand for greener energy remains to be seen.

**END OF EXHIBIT 2**

## EXHIBIT 3

**Summary consolidated management accounts 2018 – 2020****Red Dot Petroleum****Consolidated Statement of Profit or Loss for the year ended**

	Notes	31 October 2020 \$'million	31 October 2019 \$'million	31 October 2018 \$'million
<b>Refining</b>				
Revenue	1	685	1,797	1,840
<i>Cost of sales:</i>				
Crude oil costs (charged by production)	1	(644)	(1,563)	(1,656)
Processing costs		(116)	(162)	(147)
<i>Total cost of sales refining</i>		<u>(760)</u>	<u>(1,725)</u>	<u>(1,803)</u>
<b>Gross profit/ (loss) refining</b>		<u>(75)</u>	<u>72</u>	<u>37</u>
<b>Production and exploration</b>				
Total revenue from production (including sales to refining division)	1	1,111	2,014	1,988
<i>Cost of sales:</i>				
Exploration expenditure		(80)	(92)	(87)
Production costs		(380)	(406)	(382)
Midstream costs (charged by midstream division)		(122)	(133)	(124)
Depreciation of oil and gas properties		(220)	(267)	(254)
Write off of capitalised exploration expenditure		(619)	(45)	(41)
Impairment of oil and gas properties		(407)	(308)	0
<i>Total cost of sales production and exploration</i>		<u>(1,828)</u>	<u>(1,251)</u>	<u>(888)</u>
<b>Gross profit/ (loss) production and exploration</b>		<u>(717)</u>	<u>763</u>	<u>1,100</u>
<b>Profits/ (losses) on midstream activities and oil trading</b>	2	<u>(17)</u>	<u>94</u>	<u>44</u>
<b>Total gross profit/ (loss) from all activities</b>		<u>(809)</u>	<u>929</u>	<u>1,181</u>
Administrative expenses		(295)	(281)	(268)
Profit/ (loss) before interest and tax		(1,104)	648	913
Finance costs	3	(127)	(95)	(98)
Profit/ (loss) before tax		(1,231)	553	815
Taxation		217	(94)	(139)
<b>Profit/ (loss) after tax</b>		<u>(1,014)</u>	<u>459</u>	<u>676</u>
Dividends		(203)	(203)	(202)
Retained profits/ (losses)		<u>(1,217)</u>	<u>256</u>	<u>474</u>

## Consolidated Statement of Financial Position as at

	Notes	31 October 2020 \$'million	31 October 2019 \$'million	31 October 2018 \$'million
<b>Non-current assets</b>				
Property, plant & equipment	4	1,725	2,039	1,948
Goodwill		129	129	129
Intangible assets - capitalised exploration expenditure	5	380	1,046	1,032
Investment - share of refinery	6	485	471	453
<b>Total non-current assets</b>		<b>2,719</b>	<b>3,685</b>	<b>3,562</b>
<b>Current assets</b>				
Inventories		68	150	169
Trade receivables		72	176	175
Tax recoverable		217	0	0
Cash and cash equivalents		135	224	164
<b>Total current assets</b>		<b>492</b>	<b>550</b>	<b>508</b>
<b>Total assets</b>		<b>3,211</b>	<b>4,235</b>	<b>4,070</b>
<b>Equity</b>				
Share capital		700	700	700
Retained profits		902	2,119	1,863
<b>Total equity</b>		<b>1,602</b>	<b>2,819</b>	<b>2,563</b>
<b>Non-current liabilities</b>				
Long term debt	7	1,060	775	765
Provision for decommissioning	5	337	306	278
<b>Total non-current liabilities</b>		<b>1,397</b>	<b>1,081</b>	<b>1,043</b>
<b>Current liabilities</b>				
Accounts payable		72	176	175
Current portion of long-term debt	7	140	65	150
Tax		0	94	139
<b>Total current liabilities</b>		<b>212</b>	<b>335</b>	<b>464</b>
<b>Total equity and liabilities</b>		<b>3,211</b>	<b>4,235</b>	<b>4,070</b>

### Non-financial information for the year ended

	Notes	31 October 2020	31 October 2019	31 October 2018
Crude oil produced (barrels)		17,027,413	20,877,013	18,939,960
Crude oil refined (barrels)		11,672,700	17,958,000	17,520,000
Natural gas produced (thousand cubic metres)		1,287,591	1,170,538	1,064,125
Number of employees		633	959	935
Employee engagement score	8	68%	70%	72%
Greenhouse gas emissions (thousand tonnes of CO <sub>2</sub> equivalent)		411	630	596
Number of losses of primary containment	8	1	1	1
Oil spilled (tonnes)	8	3	20	2
Reported recordable injuries	8	0.143	0.120	0.118

## Notes to the management accounts:

### 1. Revenue

	<b>31 October 2020 \$'million</b>	<b>Year ended 31 October 2019 \$'million</b>	<b>31 October 2018 \$'million</b>
Total revenue from production*	1,111	2,014	1,988
Less sales to refining division	(644)	(1,563)	(1,656)
Refining division revenue	685	1,797	1,840
Total external revenue	<u>1,152</u>	<u>2,248</u>	<u>2,172</u>

\*The sources of revenue from production were as follows:

	<b>31 October 2020 \$'million</b>	<b>Year ended 31 October 2019 \$'million</b>	<b>31 October 2018 \$'million</b>
Crude oil sales	939	1,823	1,789
Natural gas sales	172	191	199
Total revenue from production	<u>1,111</u>	<u>2,014</u>	<u>1,988</u>

Inter divisional sales of crude oil from the exploration and production division are made at the average market price for the month in which the sale is made.

### 2. Profits/ (losses) on midstream activities and oil trading

Midstream activities are the storage and distribution of oil using the company's storage and transport facilities. Most of the business of this division is inter divisional as it stores and transports oil and oil-based products on behalf of the other divisions. The midstream division is also involved in the trading of oil and oil-based products.

### 3. Finance costs

	31 October 2020 \$'million	Year ended 31 October 2019 \$'million	31 October 2018 \$'million
Unwinding of discount on provision for decommissioning	(31)	(28)	(25)
Interest on long-term debt	(96)	(67)	(73)
<b>Total</b>	<b>(127)</b>	<b>(95)</b>	<b>(98)</b>

The provision for decommissioning costs is the net present value of the expected decommissioning costs when oil wells are exhausted. Since the provision is based on present values, the value of the provision increases due to the reduction in time until the costs are incurred. A discount rate of 10% was used in calculating the net present value.

### 4. Property, plant and equipment

	31 October 2020 \$'million	As at 31 October 2019 \$'million	31 October 2018 \$'million
Land and buildings	68	68	67
Oil and gas properties	1,504	1,826	1,739
Storage facilities	89	76	74
Transportation equipment	48	52	52
Fixtures and fittings	16	17	16
<b>Total</b>	<b>1,725</b>	<b>2,039</b>	<b>1,948</b>

Non-current assets are tested for impairment when there is an indication that their recoverable amount may have fallen below their carrying value. In some cases, this review is performed in respect of cash generating units rather than individual assets, where a cash generating unit is defined as the smallest group of assets that generates cash flows independently.

## **5. Intangible assets - capitalised exploration expenditure**

Exploration and drilling costs are capitalised. Capitalised costs include a provision for decommissioning at the end of the life of an oil well.

On commencing production from a new well, a provision for the future costs of decommissioning is made. The decommissioning costs include removal of the oil platforms and rigs, plugging the wells and leaving the seabed as clean as possible. When the provision is made, the amount is also capitalised and included in capitalised exploration expenditure in intangible assets.

The value of intangible assets is amortised over their expected useful lives, or in the case of capitalised decommissioning costs, the expected life of the oil wells.

## **6. Investment**

The investment represents Red Dot's 30% interest in the Singapore Refining Company's refinery. This is accounted for using the equity method. Red Dot has the right to use 30% of the refinery's capacity to refine its own oil. The refinery charges its owners their share of the costs incurred during the year, and does not make any profit or loss.

## **7. Long term debt**

Long term debt principally consists of bank borrowings and bonds. All borrowings are in Singapore Dollars.

## **8. Non-financial performance indicators**

Employee engagement is measured through an employee survey that is conducted annually on behalf of the company by a third party. The score is the percentage of employees who state that they agree with the objectives of the company and feel that they contribute to achieving these in their jobs.

Losses of primary containment are incidents which involve the leakage of oil or gas into the environment. They are usually caused by corrosion of pipelines or during maintenance work.

The total amount of oil spilled from such incidents is reported in tonnes.

Reported recordable injuries represents the number of incidents resulting in serious injury or death per 200,000 hours worked.

**END OF EXHIBIT 3**

**Newspaper article: The Hin Leong Scandal****Singapore Bugle report – February 2021****Hin Leong scandal heralds new era in transparency and corporate governance**

Oon Kuin Lim (OK Lim) started Hin Leong Trading Pte Ltd (Hin Leong hereafter) as a one-man-one-truck oil delivery company in the mid-1960s, buying oil wholesale from oil companies and selling it to local taxi, bus and fishing boat operators in Singapore. When his business grew, he incorporated his operations in 1973 and expanded into oil shipping and storage. Hin Leong became the focal point for the Singapore oil trading industry – an institution in its own right. Its bunkering arm was Singapore’s third largest facility in 2019, accounting for 10% of all local bunker sales, and a key supplier to Indonesia and Myanmar, to name just two.

In 2020, the price of Brent Crude collapsed, ultimately leading to Hin Leong defaulting on loans and lenders freezing credit lines. OK Lim resigned and Hin Leong filed for bankruptcy protection in April 2020. The subsequent judicial management process revealed ‘irregularities’.

According to the charges, OK Lim directed a Hin Leong employee to forge a document that was later used to secure trade finance of \$56 million. This sparked a deeper investigation, leading two weeks later to the judicial managers of Hin Leong suing OK Lim and his 2 children for \$3.5 billion for the outstanding debts, and \$90 million for the recovery of dividends paid out of disputed profits. The interim judicial review into the affairs of Hin Leong painted a picture of systemic corruption and irregularity.

The collapse of Hin Leong not only sent shockwaves through the oil and gas sector, but also threatened to permanently damage Singapore’s clean reputation on which its economy depends.

Authorities scrambled to limit fallout, with government agencies Enterprise Singapore, the Maritime and Port Authority of Singapore and the Monetary Authority of Singapore closely monitoring the impact of the collapse on the wider oil-trading scene, leading to likely increased corporate governance and industry regulation in the future. The exact regulatory consequences are yet to unfold, but businesses, especially oil businesses, are

in the meantime redoubling their efforts to rebuild confidence in the industry and in Singapore as a reliable and trustworthy commercial trading hub.

**END OF EXHIBIT 4**

**Extract: Minutes of Board meeting held on 7 November 2021**

Apologies: None. Members of the management committee were in attendance

**Oil Exploration**

Nicole Chong presented recent management accounts analysing financial performance by business segment. Of key concern was the worsening performance of the oil exploration business.

Jing Yi Zhang proposed an explanation. The issue is two-fold: price and volume. The price of crude oil has been low, and incredibly volatile in recent times – for example, the price of a barrel of Brent crude was negative in mid-2020 amid fears of excessive storage costs. Although admittedly a ‘blip’, the price of Brent crude was around \$50 a barrel in 2020, down from more than \$100 a barrel 6-7 years before. Demand has reduced globally throughout the pandemic, not only putting further pressure on prices but also on revenues overall as volume declines. The high operational gearing of the work involved makes exploration particularly vulnerable to revenue variations.

The Board discussed methods of circumventing price volatility, with no firm conclusion at this stage. Ryan Tan asserted his view that oil’s medium to long term outlook was poor, with gas performing better but only until alternative fuels become more mainstream. The Board agreed to reconvene to discuss the strategic implications of the subject.

**Hin Leong Trading Fallout**

The audit committee began by noting the increased pressure put on the sector and regulators by the Hin Leong Scandal, and led a discussion as to what Red Dot in particular should do to ensure it remained a trusted brand with investors, suppliers, customers and employees.

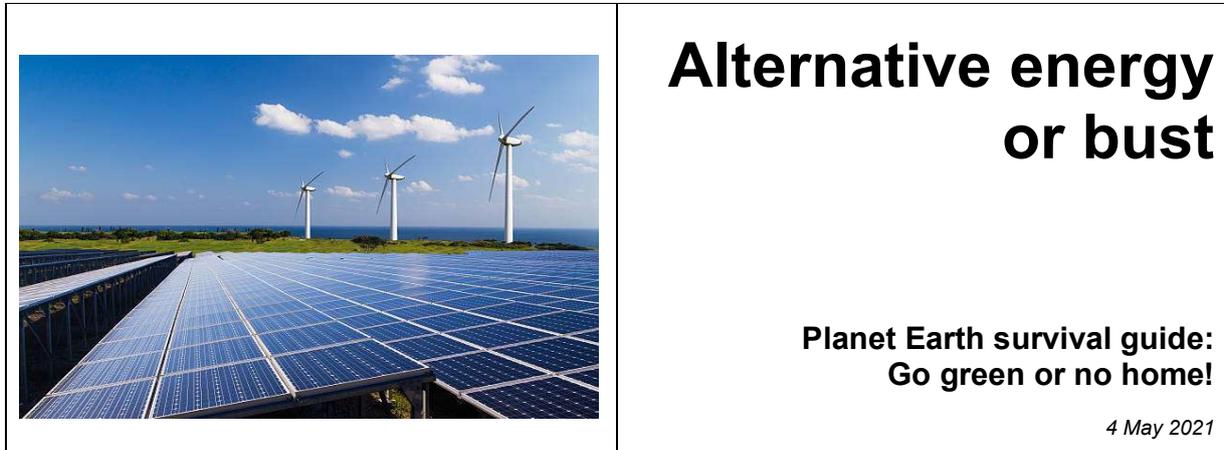
The current Corporate Social Responsibility Programme was discussed at length. The CEO agreed to discuss whether the content and extent of the current programme was ‘fit for purpose’ with industry advisors, and to report back to the Board in due course.

Attention then turned to whether the current financial reports could be called 'transparent' for the stakeholders to understand the operations of Red Dot sufficiently. Nicole Chong noted the current annual report fulfilled all statutory and regulatory requirements.

The chair of the audit committee expressed concern, however, stating that Red Dot needed to go above and beyond the legal minimum in an effort to demonstrate to stakeholders not only its transparency, but that further it had nothing to hide, which was essential to engender trust. One possible approach, which is gaining popularity is integrated reporting. By reporting on a broader range of issues, stakeholders would better understand how Red Dot created value for them. Nicole Chong agreed to look into this and to send a briefing note to the Board explaining corporate, social responsibility and integrated reporting.

There being no further business, the meeting concluded at 19:30.

**END OF EXHIBIT 5**

**Newspaper article on alternative energy**

**The use of fossil fuels is killing the planet. In this article, we consider the alternatives to using fossil fuels, and we examine the state of the alternative energy industry.**

The 'alternative' in alternative energy refers broadly to alternatives to fossil fuels – which means alternatives to natural fuels such as oil or gas, formed in the geological past from the remains of living organisms. Although still relatively plentiful, it is a finite supply that is being rapidly depleted. Unfortunately, burning fossil fuels releases the carbon previously trapped in the fuel back into the atmosphere, contributing to climate change and environmental degradation globally. For example, the average global temperature in 2020 was around 1 degree Celsius higher than the 20<sup>th</sup> century average. This trend persists decade after decade, contributing to icecaps melting causing rising sea levels, and changing weather patterns, to name just two of the myriads of effects unleashed by global warming. This is driven largely by the burning of fossil fuels and the associated release of carbon-based pollutants - which, in 2020, was around 34 billion tonnes globally compared to less than 6 billion tonnes in 1950.

## What are the alternatives?

Let's briefly consider the main alternatives to fossil fuels:

- **Solar:** This includes the use of photovoltaic cells to produce electricity directly, and the use of solar thermal panels to heat water.
- **Wind:** This typically includes wind turbines – from very small domestic installations to large industrial turbines housed in wind farms, on- and off- shore.
- **Nuclear:** traditional thermal fission reactors have been around since the 1950s and they generate electricity by using a nuclear reaction to create heat, turning water into steam that then drives turbines. Used nuclear fuel is extremely hazardous and difficult to dispose of, and nuclear power stations are incredibly expensive to decommission. Research is ongoing into the possibility of 'cold fusion' but this is considered highly speculative by many and has borne limited fruit to date.
- **Biopower:** Derived from organic matter including plants and waste. Examples include the production of bioethanol and biodiesel. Although an alternative to traditional fossil fuels, some still yield significant amounts of carbon-based pollutants.
- **Water:** Stored water can be used to drive turbines, often using dams to build consistent reserves of water for this purpose. Oceans can also be used as a source of geothermal power (see below), and tides can be harnessed to create electricity from turbines.
- **Geothermal** energy includes harnessing the planet's core heat. For example, in countries like New Zealand where there is a relatively plentiful supply of near-surface volcanic activity in certain areas, heating and electricity can be provided relatively efficiently. The growing use of ground heat pumps globally is a good example of the use of geothermal energy. The pumps concentrate energy using a refrigerant that is warmed by the ground, then compressed to extract the heat – like a traditional refrigerator in reverse.
- **Hydrogen** is a high energy fuel, and is plentiful in nature. When it burns, the only resulting substance is water. Unfortunately, as pure gas hydrogen is rarely available naturally on earth, so it must be manufactured. This process has historically used, ironically, fossil fuels to manufacture the hydrogen, although modern techniques such as solar thermochemistry are set to turn hydrogen production 'green'.

### **Market information on the use of alternatives to generate electricity.**

Globally, just over a quarter of all electricity is generated using sources classed as renewable. Around 15% of all electricity demand is satisfied by hydropower, and around 9% of all electricity is produced by solar and wind power. Hydro, solar and wind therefore make up the bulk of renewables power generation currently. Solar is the fastest growing sector with growth of around 15% in 2020. This is down from over 30% in 2018, as investment in renewables reduced due to the COVID pandemic, but is set to recover. 60% of electricity production still comes from coal and gas, though this percentage falls consistently each year.

### **Singapore**

Singapore currently satisfies the vast majority of its energy needs with fossil fuels – petroleum-based products, coal, and natural gas. However, solar is one of the fastest growing sectors with 290 megawatts generated in 2020, compared to 271 megawatts in 2019 and 190 megawatts in 2018. However, this still only represents less than 3% of energy production.

### **The future**

The accelerating global trend is for an increased use of renewables, although there is significant competition within the renewables sector itself for a dominant technology. Public and political sentiment as well as the associated tax incentives and support will ensure this trend continues – hopefully before we run out of fresh air to breathe!

**END OF EXHIBIT 6**

## **Briefing note - Corporate Social Responsibility and Integrated Reporting**

The Hin Leong scandal has led to greater calls for more transparency in corporate reporting. Traditional reports tend to focus only on the financial results of corporations and do not give a holistic view of the impact that corporations have on society.

One area that we should consider reporting on is our approach to corporate social responsibility. This looks at the extent to which we are accountable to our stakeholders and the public for the impact that Red Dot has on society. Areas of interest are the products we produce for society, the jobs we create, how well we treat employees, how we behave to our suppliers and customers, and our impact on sustainability. We would also report on activities that we perform to support local communities.

Various frameworks for a broader approach to corporate reporting have been proposed in recent decades. One of the most comprehensive is the integrated reporting approach. An integrated report is "a concise communication about how an organization's strategy, governance, performance and prospects, in the context of its external environment, lead to the creation of value in the short, medium and long term" (Integrated Reporting.org).

The report aims to improve "integrated thinking" meaning that decision makers will pay attention to the impact that an organisation has on six capitals: Financial, Manufactured, Intellectual, Human, Social and Relationship and Natural. Financial capital is the traditional financial capital. Manufactured capital relates to the assets that the organisation has produced, such as building oil platforms. Intellectual capital identifies the knowledge that the organisation has created, for example by performing research and development. Human capital identifies how much the organisation has used in terms of human skills, and how it has contributed to increasing human skills and knowledge through training. Social and relationship capital looks at the relationships that the organisation has developed with its stakeholders and with society as a whole. Natural capital looks at the use of nature by the organisation and the extent to which it has depleted or increased the availability of natural capital.

If we do adopt integrated reporting at Red Dot, we will need to update our information systems to collate the information required. We will also need to consider the extent to

which our auditors would be able to provide assurance on the report - it may not be feasible to provide a traditional audit report on all of the information provided in such a report.

Please let me know if you have any questions on the above.

Nicole Chong, 28 November 2021

**END OF EXHIBIT 7**

## EXHIBIT 8

### Transcript of interview between Ryan Tan and Max Teo of Singapore Oil and Gas Consultants ('SOG') on 1 December 2021

*Max: Thank you for agreeing to see us Mr Tan. My understanding is you would like to understand if Red Dot's Corporate Social Responsibility (CSR programme) is fit for purposes in a post Hin Leong world?*

Ryan: Absolutely right!

*Max: We can certainly help with that. Perhaps you could let us know what the programme is like now and we'll go from there?*

Ryan: CSR is a core tenet in Red Dot's business philosophy, and this can be seen in the regular upgrading of its refinery operations to produce cleaner fuels, as well as initiatives ensuring that all operations are conducted safely. CSR is extended to all communities in which the company operates, with Red Dot instigating and taking an active role in environmental, philanthropic and cultural endeavours, prioritising sustainability.

Recent community programmes and events supported by Red Dot in the region include on-going sponsorship of the Sumatran Orangutan Sanctuary on Sumatra, the Green Shoots mentorship programme for environmental start-ups in Singapore, and gold-star sponsorship of the Red Rock music festival held each year in an Asian capital city.

Main components include:

#### **1. Core business to be net-zero by 2050**

With substantial investments in international infrastructure, assets valued in the trillions of dollars and investment lifecycles stretching over decades, the global oil industry will need time to transition productively and safely while meeting its responsibilities to employees, investors and consumers, but the need for transition is unquestionable. Red Dot aims for its core business to achieve carbon neutrality by 2050.

The period of transition will create challenges for profitability, with investments required for long-term growth negatively impacting short-term profitability.

## **2. Refocus of R&D**

Red Dot's extensive experience operating in challenging environments can provide a competitive edge in the development of offshore solar and wind farms. Similarly, Red Dot's technical expertise and legacy infrastructure place it in an advantaged position to produce, store and transport hydrogen as a source of clean energy, and to store and transport low-carbon fuels for third parties. The company is also well placed to scale large and complex carbon-capture projects, with CO<sub>2</sub> stored in depleted oil and gas reservoirs. The majority of future R&D expenditure will be committed to these fields, as well as solar, battery design and digital logistics technologies such as autonomous vessels.

## **3. Gradual decarbonisation of existing assets**

Red Dot's existing facilities will continue their traditional roles for the foreseeable future, but all efforts will be made to reduce their emissions and to de-carbonise. Strategies to be implemented immediately on offshore facilities include on-site renewable power generation to provide a cost-effective alternative to diesel fuel, improvement in leak detection and repair, replacement of gas boilers with electric steam-production systems, and increased use of carbon-capture technologies.

## **4. Retraining and redeployment of technical staff**

Red Dot's experienced mechanical, electrical, chemical and process engineers are a valuable resource with all the core technical skills required to be retrained and redeployed quickly in new fields. In partnership with the Redder-than-Red Dot Employees Union, Red Dot will establish a committee to oversee the retraining and up-skilling of current employees for future roles. Managing job transition while balancing the needs of existing staff will be critical.

## **5. Marketing and promotions**

Marketing of the company and its products and services should in future prioritise and leverage on Red Dot's commitment to achieving carbon neutrality in its core business and its investment in emerging technologies. This will in part be achieved through boosting

the company's social media presence to reach new audiences, and through educational programmes and expansion of current CSR operations.

## **6. Reaching Singapore's youth**

Achieving carbon neutrality by 2050 will require an end-to-end approach to education, with increasing awareness of environmental responsibilities in children attending schools in Singapore. This will enable local industry to embrace necessary technologies and provide the future decision-makers and problem-solvers needed to design novel energy solutions in the future.

Red Dot intends to collaborate with the Ministry of Education in designing and supporting educational programmes that not only raise awareness of the challenges of climate change, but also instil an optimistic, solutions-driven approach to environmentalism.

## **7. Outreach programmes**

Red Dot's CSR programme already spans an array of environmental, philanthropic and cultural projects in Singapore and the region. These will be expanded, beginning in 2021 with the first 'Green Light' competition, a biannual event.

To participate in the competition, start-up companies working in green energy must present their novel engineering solutions designed to create a brighter tomorrow. These will then be judged by a panel of experts from Red Dot and international bodies, as well as Singapore's Minister of Sustainability and the Environment. The winner will receive a prize of S\$1m for future R&D.

*Max: Thanks for that Mr Tan. I'll write our discussion up for you to check through, then I'll get onto it!*

**END OF EXHIBIT 8**

**EXHIBIT 9****Financial information for the New Basin oil production activities of Red Dot****Petroleum.**

The New Basin oil field is in Indonesia. Red Dot has the rights to extract oil from some blocks in this field. The extraction of oil from this field has presented geological challenges leading to higher costs than expected. In the year ended 31 October 2020, Red Dot made a loss on this field, but the company is budgeted to make a profit in the year ended 31 October 2021.

The actual results for this field for the year ended 31 October 2020 and the budgeted for next year are as follows:

New Basin	<b><i>Budget</i></b> <b><i>Year ended 31</i></b> <b><i>October 2021</i></b>	<b><i>Actual</i></b> <b><i>Year ended 31</i></b> <b><i>October 2020</i></b>
Output - barrels	2,750,000	2,472,500
	<b><i>\$'million</i></b>	<b><i>\$'million</i></b>
Revenue	192.50	136.01
Production costs	(89.50)	(87.28)
Midstream costs	(18.00)	(17.00)
Depreciation of oil and gas	(27.50)	(27.50)
Depreciation of capitalised exploration costs	(9.00)	(9.00)
<b><i>Profit/ (loss) for the year</i></b>	48.50	(4.77)

Production costs and midstream costs include both a fixed and variable element. All other costs are fixed. Budgeted costs are based on the expected costs for the year ended 31 October.

**END OF EXHIBIT 9**

## Suggestions for further research and reference list

### Further research

The following resources may be useful when beginning your research into the case study company. As always, the caveat is to read everything with a healthy dose of scepticism and apply professional judgement. Just because an article is on this list, does not give it legitimacy or relevance. All links were active as at 28 June 2021.

### Articles and information:

#### Case study reference list

1. <https://www.trade.gov/energy-resource-guide-singapore-oil-and-gas>
2. <https://www.statista.com/statistics/1009484/singapore-oil-production>
3. <https://www.edb.gov.sg/en/our-industries/oil-and-gas-equipment-and-services.html>
4. <https://eresources.nlb.gov.sg/history/events/37c6a7dd-c7de-4378-819e-e2407839f8d5#7>
5. <https://www.ema.gov.sg/ourenergystory>
6. [https://en.wikipedia.org/wiki/Singapore\\_Petroleum\\_Company](https://en.wikipedia.org/wiki/Singapore_Petroleum_Company)
7. <https://jpt.spe.org/opec-moves-end-price-war-10-million-bd-cut>
8. <https://realeconomy.rsmus.com/oil-prices-show-unprecedented-volatility-in-2020-and-a-path-to-recovery-remains-uncertain/>
9. <https://www.ft.com/content/6b6d10b1-acc2-4f9f-9050-1bc4468dd9fb>
10. <https://www.argusmedia.com/en/news/2100408-covid19-highlights-singapores-exposure-to-oil-slump>
11. <https://www.reuters.com/article/us-singapore-oil-trade-financing-idUSKCN2231N9>
12. <https://asia.nikkei.com/Business/Markets/Commodities/Hin-Leong-scandal-adds-tarnish-to-fading-Singapore-brand>
13. <https://www2.deloitte.com/us/en/pages/energy-and-resources/articles/oil-and-gas-industry-outlook.html>
14. <https://www.reuters.com/article/us-global-oil-jet-fuel/cloudy-outlook-for-stalled-jet-fuel-demand-recovery-idUSKBN2AI0BU>

15. <https://www2.deloitte.com/content/dam/Deloitte/in/Documents/finance/in-fa-impact-of-covid-19-on-o-and-g-industry-noexp.pdf>
16. <https://www.bloomberg.com/news/articles/2020-04-08/oil-storage-at-asian-hub-just-got-pricey-if-you-snagged-space>
17. <https://www.reuters.com/article/global-oil-storage/oil-optimism-unwinding-markets-mad-dash-for-storage-idUSL8N2KW4O5>
18. <https://www.pewresearch.org/fact-tank/2020/10/19/natural-gas-viewed-more-positively-than-other-fossil-fuels-across-20-global-publics>
19. <https://www.gep.com/blog/mind/the-growing-importance-of-ai-in-the-oil-and-gas-industry>
20. <https://govinsider.asia/intelligent-gov/how-singapore-is-gearing-up-for-autonomous-shipping-mpa>
21. <https://www.trade.gov/energy-resource-guide-singapore-oil-and-gas>
22. <https://www.asiaone.com/money/hin-leong-tradings-114b-cover-scandal-what-singaporeans-need-know>
23. [https://www.channelnewsasia.com/news/commentary/keppel-oil-rig-sembcorp-clean-energy-offshore-results-merger-14080956?cid=h3\\_referral\\_inarticlelinks\\_24082018\\_cna](https://www.channelnewsasia.com/news/commentary/keppel-oil-rig-sembcorp-clean-energy-offshore-results-merger-14080956?cid=h3_referral_inarticlelinks_24082018_cna)
24. <https://www.channelnewsasia.com/news/commentary/singapore-clean-energy-oil-gas-shell-keppel-carbon-tax-climate-14102988>
25. <https://www.mckinsey.com/industries/oil-and-gas/our-insights/the-future-is-now-how-oil-and-gas-companies-can-decarbonize#>
26. <https://integratedreporting.org/wp-content/uploads/2021/01/InternationalIntegratedReportingFramework.pdf> (slides 1 - 9 and 16 - 21 are particularly important)
27. <https://www2.deloitte.com/uk/en/pages/audit/articles/integrated-reporting.html>
28. <https://integratedreporting.org/wp-content/uploads/2015/07/IIRC-Assurance-Overview-July-2015.pdf>

**END OF EXHIBIT 10**

**END OF ADVANCED INFORMATION**