

PP

Chartered
Accountant
SINGAPORE

Singapore CA Qualification Examination

INTEGRATIVE BUSINESS SOLUTIONS

Examination Day Documents

6 Dec 2021

INSTRUCTIONS TO CANDIDATES:

1. The time allowed for this examination paper is **4 hours and 30 minutes**. Please note, there is no separate prescribed reading time for this examination.
2. This is an open book examination. During the examination, you are allowed to use your laptop and any calculators that comply with the SAC's regulations. Please note that watches, mobile phones, tablets, and all other electronic devices **MUST NOT** be used during the examination.
3. During the examination, videos of you and your computer screen will be recorded for the purpose of ensuring examination integrity and you have consented to these recordings.

4. This examination paper and all video recordings are the property of the Singapore Accountancy Commission.
5. 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.

IMPORTANT NOTICE:

If you are not feeling well, please do not press “Start Assessment”. If you have started and leave during the exam, you would be deemed to have attempted the paper.

Case study report instructions

These Examination Day Documents (EDD) complete the case study scenario and set out the requirements of the report that you are required to write (**Exhibit 16**). You must combine your pre-reading and analysis of the Advance Information (AI), your other pre-examination research, and the new information in the EDD to plan the content and structure of your report, and then to write the report.

**Question
Number**

1

****VERY IMPORTANT NOTICE****

1. Your question paper is attached under the "**Resources**" tab found at the bottom right of **EACH** question.
2. You may also download the question paper that allows annotation throughout your exam in Question 1 of the e-Exam portal.
3. Please download the relevant required Appendices in Question 1 of the e-Exam portal.

Other important information:

4. You will be allowed to access your reference materials but **will not be allowed** to communicate with anyone either physically or through any electronic means.
5. You are **NOT ALLOWED** to access any websites during the exam.
6. You are **NOT ALLOWED** to print the question paper.
7. **Please take note that your screen will be monitored throughout the examination. If you are found to have accessed any websites, or if you cheat or attempt to cheat, you will be liable to severe disciplinary action.**

Should you encounter any issues during the exam, please call the following numbers:
+65 6100 0516

8. **You do not need fill in an answer for this question.**

Report format

Your report should follow the following format:

Requirement	Cirrus Qn. Number	Marks
Requirement 1 – An Executive Summary	2	10
Requirement 2 – Strategic and performance analysis	3,4,5	27
Requirement 3 – Strategic options	6,7,8,9,10	37
Requirement 4 – Reporting and controls	11,12,13,14	26

You should clearly state any assumptions that you make and include any supporting data. Please put your appendices (if any) at the end of each question part.

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.**

Advance Information (AI) – List of Exhibits

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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
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Exam Day Documents (EDD) – List of Exhibits

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

Summary consolidated management accounts 2020 – 2021**Red Dot Petroleum****Statement of Profit or Loss for the year ended**

	Notes	31 October 2021 \$'million	31 October 2020 \$'million
Refining			
Revenue	1	1,160	685
<i>Cost of sales:</i>			
Crude oil costs (charged by production)	1	(1,009)	(644)
Processing costs		(104)	(116)
<i>Total cost of sales refining</i>		<u>(1,113)</u>	<u>(760)</u>
Gross profit/ (loss) refining		<u>47</u>	<u>(75)</u>
Production and exploration			
Total revenue from production (including sales to refining division)	1	1,462	1,111
<i>Cost of sales:</i>			
Exploration expenditure		(46)	(80)
Production costs		(409)	(380)
Midstream costs (charged by midstream division)		(130)	(122)
Depreciation of oil and gas properties		(231)	(220)
Write off of capitalised exploration expenditure		(40)	(619)
Impairment of oil and gas properties		0	(407)
<i>Total cost of sales production and exploration</i>		<u>(856)</u>	<u>(1,828)</u>
Gross profit/ (loss) production and exploration		<u>606</u>	<u>(717)</u>
Profits/ (losses) on midstream activities and oil trading			
	2	28	(17)
Total gross profit/ (loss) from all activities		<u>681</u>	<u>(809)</u>
Administrative expenses		(292)	(295)
Profit/ (loss) before interest and tax		389	(1,104)
Finance costs	3	(130)	(127)
Profit before tax		259	(1,231)
Taxation		(80)	217
Profit/ (loss) after tax		<u>179</u>	<u>(1,014)</u>
Dividends		(204)	(203)
Retained profits/ (losses)		<u>(25)</u>	<u>(1,217)</u>

Consolidated Statement of Financial Position as at

	Notes	31 October 2021 \$'million	31 October 2020 \$'million
<i>Non-current assets</i>			
Property, plant & equipment	4	1,801	1,725
Goodwill		129	129
Intangible assets - capitalised exploration expenditure	5	423	380
Investment - share of refinery	6	480	485
Total non-current assets		2,833	2,719
<i>Current assets</i>			
Inventories		123	68
Trade receivables		122	72
Tax recoverable		0	217
Cash and cash equivalents		131	135
Total current assets		376	492
Total assets		3,209	3,211
 <i>Equity</i>			
Share capital		700	700
Retained profits		877	902
Total equity		1,577	1,602
 <i>Non-current liabilities</i>			
Long term debt	7	920	1,060
Provision for decommissioning	5	370	337
Total non-current liabilities		1,290	1,397
 <i>Current liabilities</i>			
Accounts payable		122	72
Current portion of long term debt	7	140	140
Tax		80	0
Total current liabilities		342	212
 Total equity and liabilities		 3,209	 3,211

Non-financial information for the year ended

	Notes	31 October 2021	31 October 2020
Crude oil produced (barrels)		18,257,114	17,027,413
Crude oil refined (barrels)		15,174,510	11,672,700
Natural gas produced (thousand cubic metres)		1,416,351	1,287,591
Number of employees		751	633
Employee engagement score	8	68%	68%
Greenhouse gas emissions (thousand tonnes of CO ₂ equivalent)		557	411
Number of losses of primary containment	8	2	1
Oil spilled (tonnes)	8	150	3
Reported recordable injuries	8	0.122	0.143

Notes to the management accounts

1. Revenue

	Year ended	
	31 October 2021	31 October 2020
	<i>\$'million</i>	<i>\$'million</i>
Total revenue from production*	1,462	1,111
Less sales to refining division	(1,009)	(644)
Refining division revenue	1,160	685
Total external revenue	<u>1,613</u>	<u>1,152</u>

*The sources of revenue from production were as follows:

	Year ended	
	31 October 2021	31 October 2020
	<i>\$'million</i>	<i>\$'million</i>
Crude oil sales	1,260	939
Natural gas sales	202	172
Total revenue from production	<u>1,462</u>	<u>1,111</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

	Year ended	
	31 October 2021	31 October 2020
	<i>\$'million</i>	<i>\$'million</i>
Unwinding of discount on provision for decommissioning	(33)	(31)
Interest on long-term debt	(97)	(96)
Total	(130)	(127)

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

	As at	
	31 October 2021	31 October 2020
	<i>\$'million</i>	<i>\$'million</i>
Land & buildings	67	68
Oil and gas properties	1,579	1,504
Storage facilities	91	89
Transportation equipment	48	48
Fixtures and fittings	16	16
Total Property, plant and equipment	1,801	1,725

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 sea bed 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. The average for the industry in 2021 was 2.12.

END OF EXHIBIT 11

Proposal to work with Sigma Solar Farms – Briefing paper

To: The Board, Red Dot Petroleum
From: Ryan Tan
Subject: Sigma proposal
Date: 12 November 2021

Proposal for building an offshore solar farm in the Gulf of Thailand

As you know, given our commitment to corporate social responsibility, and the medium-to long-term outlook for fossil fuels, we are considering ways of expanding into the alternative energy sector.

An interesting proposition has been made to us by Sigma Solar Farms (Sigma hereafter) for the joint development of a solar farm to be sited in the Gulf of Thailand, around 200 kilometres east of Kota Bharu in Malaysia.

Proposal outline

- Goal: the construction and operation of a floating solar farm, initially around 40,000 square metres in size, output between 4,000 KW and 11,000 KW depending on weather.
- Use of robotics and artificial intelligence to automate cleaning and maintenance as well as fault diagnosis.
- Electricity to be piped to Malaysia and sold initially to the Malaysia grid. Electricity then to be sold to the Singapore grid via specific arrangement with Malaysia.

Outline collaboration terms

- To be structured through a separate entity, whose company constitution incorporates the terms of the arrangement between Red Dot and Sigma.
- Red Dot and Sigma to have equal equity holdings and voting rights in the entity, each investor to appoint two members to the Board of Directors of the new entity.

- 50:50 capital investment by Sigma and Red Dot, with each company investing specific assets plus a balancing amount of cash to achieve equal investment.
- Red Dot to provide: floating platform, robotics/artificial intelligence, offshore environmental management expertise.
- Sigma to provide: panels, infrastructure from the farm to the Malaysian grid, and to negotiate the on-sale agreement of electricity to Singapore.
- New entity to own and have rights to all assets transferred to it.
- Manual labour input (for maintenance, for example) to be shared 50:50 with an aim to keep this requirement minimal through automation and artificial intelligence.
- Costs incurred by Sigma and Red Dot relating to the venture will be claimed back from the venture at cost. Both sides will share accounting records relating to such costs to help facilitate this.
- Decisions about the operations of the separate entity relating to the sale of electricity, purchase of additional goods or services and selection of assets to require a simple majority of votes.
- Profits to be shared in proportion to equity ownership.
- New entity to be liable for any individual debts, liabilities or obligations that it incurs, with no transfer of liability to Red Dot and Sigma.
- Timescales: construction over 18 months, so estimated go-live mid to late 2023.
- Detailed financial projections are supplied separately.

I believe this is a huge opportunity with significant options to follow on with other similar projects. The arrangement with Sigma is non-exclusive so we would be free to exploit the experience gained on this project elsewhere. The global demand for alternative energy is huge, and is largely untapped. Offshore wind has been popular to date but wind turbines cannot operate if the wind is too high or too low, and mechanical turbines need careful maintenance in the harsh marine environment. Solar farms simply float! They can be made resistant to stormy seas by the rig design, they can operate in low and high winds, and they require much less maintenance – the bulk of maintenance is panel cleaning, which we are going to automate as much as possible, as well as using an industrial glass coating to keep the panels as clean as possible, for as long as possible.

Artist's impression:



I look forward to discussing this further with you all in due course.

Best wishes,
Ryan

END OF EXHIBIT 12

Financial Projections for the offshore solar farm

(based on preliminary work performed by Nicole Chong, October 2021)

Assumed life: 15 years

Initial size: 40,000 square metres

Initial investment in entire venture (to be funded by Sigma and Red Dot):

	<i>\$'million</i>
Panels (\$500 per square metre for marine-ready panels)	20
Rig to support panels	10
Robotics/artificial intelligence for maintenance	15
Infrastructure link to the mainland	30
Other (including labour and working capital)	<u>25</u>
Total initial investment required	100

Annual cash flows:

Sale of electricity – after Malaysian grid margin (assume average weather conditions):
\$15m

Maintenance costs (assumed): \$2.5m

Investment appraisal summary:

Payback: $\$100\text{m}/(15-2.5) = 8$ years

NPV for Red Dot at current WACC: \$10m

Finance options being considered for Red Dot's contribution to the joint venture:

- Issue of debt via a syndicated bank loan or a debenture issue
- Rights issue and potentially a dividend reduction

END OF EXHIBIT 13

**Email from Finance Director of Red Dot Petroleum to the Board of Directors
relating to Integrated Reporting
Nicole Chong**

From: Nicole Chong <NChong@RedDot.sg>
Sent: 21 November 2021 18:45
To: Board of Directors
Subject: Integrated Reporting

Dear Colleagues,

You will recall that during our meeting on 7 November, the Chair of the audit committee suggested that Red Dot needed to report to our stakeholders on a broader range of issues. After the meeting, I had a discussion with him and we discussed the possibility of Red Dot adopting Integrated Reporting. I also sent you a briefing note outlining what Integrated Reporting is. This is something that we will need to discuss in more detail, but I wanted to give you a heads up.

The Chairman also suggested that if we do adopt Integrated Reporting, we should request that the auditors provide some assurance over certain financial forecasts, environmental targets, risk and regulatory disclosures and reporting of strategic and environment and sustainability key performance indicators. The audit committee is investigating the possibility of hiring an assurance practitioner to perform agreed assurance procedures to cover financial and non-financial information contained in the integrated report which are not covered by Red Dot's statutory audit.

I will keep you all up to date as things develop.

Best regards,
Nicole

**Email from Ryan Tan to Jasmine Eng engaging Swan Chartered Accountants LLP
to write a report on Red Dot Petroleum**

Jasmine Eng

From: Ryan Tan <RTan@RedDot.sg>
Sent: 2 December 2021 13:21
To: Jasmine Eng <ENG_Jasmine@SwanCA.sg>
Subject: Engaging Swan Chartered Accountants LLP to write a report on Red Dot

Dear Mrs Eng,

It was nice to meet you this morning.

As I mentioned during our discussions this morning, we would like to seek your professional advice to identify and understand the complex strategic challenges that Red Dot and the wider oil industry are facing. Mindful of this, I would like your firm's input on a range of matters. I would like you to present your views and recommendations in a formal report to me by 30/12/2021.

The elements that I wish to see in the report are set out in the attachment to this email (Exhibit 16).

I look forward to hearing from you

Best wishes,

Ryan Tan

END OF EXHIBIT 15

Red Dot Petroleum: the requirements

You are a Manager working at Swan Chartered Accountants LLP (Swan). You have been tasked by Jasmine Eng, Vice President of Business Solutions at Swan to write a report for her review prior to submission to Ryan Tan, the Chief Executive Officer of Red Dot.

Your formal report should comprise the following four elements:

**e-Exam
Question
Number**

2

Requirement 1: An Executive Summary

- (a)** Write an executive summary to accompany your report. Your Executive Summary should allow Mr Tan to obtain a general understanding of what your report contains, including the key numbers. You should also include clearly stated assumptions, conclusions, and recommendations.

While your Executive Summary should not contain any material or points that you have not discussed in the main body of the report, you are required to highlight any potential interactions between the individual standalone requirements below.

(10 marks)

(Total: 10 marks)

**e-Exam
Question
Number**

Requirement 2: Evaluation and strategic review

3

(a)(i) Evaluate the economic performance of Red Dot over the past three years.

(11 marks)

(a)(ii) Evaluate the social and environmental impact of Red Dot over that past three years.

(3 marks)

4

(b) Evaluate the products that Red Dot has in its portfolio using an appropriate model.

(6 marks)

5

(c) Assess the competitive environment within which Red Dot operates using an appropriate model.

(7 marks)

(Total: 27 marks)

**e-Exam
Question
Number**

Requirement 3: Business options

6

- (a)** Calculate how sensitive the 2021 budgeted profit in the New Basin oilfield is to the price of oil and the volume of output and discuss if the field should be kept open if the price of oil remains below \$50 per barrel over the long term.

Note: In the context of this question, sensitive refers to how much the price or volume of output would need to fall before a profit becomes a loss.

(10 marks)

7

- (b)** Discuss how Red Dot could protect its business from the volatility in oil prices. Calculations are not required.

(5 marks)

8

- (c)** Evaluate the proposed arrangement with Sigma Solar Farms to build an offshore solar farm off the coast of Malaysia. Further calculations are not required.

(9 marks)

9

- (d)** Discuss the proposal that the project should be financed by the issue of debt.

(5 marks)

**e-Exam
Question
Number**

Requirement 3: Business options

10

- (e)** Explain how the arrangement with Sigma Solar Farms would be accounted for and presented in the financial statements of Red Dot.

(8 marks)

(Total: 37 marks)

**e-Exam
Question
Number**

Requirement 4: Reporting and controls

11 **(a)** Critically appraise the current Corporate Social Responsibility programme at Red Dot and recommend (with justification) suitable enhancements.

(6 marks)

12 **(b)** Discuss whether Integrated Reporting would be advisable in the light of industry scandals.

(6 marks)

13 **(c)** Explain the challenges faced by the auditors in relation to the audit of the integrated report, and provide a solution how these challenges can be overcome.

(6 marks)

14 **(d)** Identify key risks and recommend controls that should be in place at Red Dot, including but not limited to those to reduce the risks of events such as those that occurred at Hin Leong.

(8 marks)

(Total: 26 marks)

END OF EXHIBIT 16

END OF PAPER