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Hydrocarbon Dynamics Limited



(ABN 75 117 387 354)

**ANNUAL REPORT
FOR THE YEAR
ENDED 31 DECEMBER 2021**

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DIRECTORS' REPORT

In accordance with a resolution of directors, the directors present their report together with the Annual Report of Hydrocarbon Dynamics Limited (HCD) and its wholly owned subsidiaries (together referred to as the 'Group') for the financial year ended 31 December 2021 and the Independent Audit Report thereon. In order to comply with the provisions of the *Corporations Act 2001*, the directors report as follows:

1. INFORMATION ON DIRECTORS

The directors of HCD at any time during or since the end of the financial year were:

(a) STEPHEN MITCHELL

Non-Executive Director (appointed 12 January 2016)

Special responsibilities:

Non-Executive Chairman

Experience:

Stephen has a Masters Degree in International Economics and Foreign Policy from Johns Hopkins University in Washington DC. following which he spent 12 years as a natural resources specialist at investment banks and advisory firms in the US and Australia. From 1999-2011 Stephen was the Managing Director of Molopo Energy Ltd, an ASX-listed oil and gas Company that held assets in Australia, Canada, USA, China, India and South Africa. Under his stewardship, Molopo generated a 10 fold increase in shareholder value and expanded its market capitalisation from less than \$1 million into an ASX 200 company.

Directorships held in other listed entities in the last three years:

None

(b) RAY SHORROCKS

Non-Executive Director (appointed 12 January 2016)

Special responsibilities:

Chairman of the Remuneration and Nomination Committee

Member of the Audit Committee

Experience:

Mr Shorrocks has more than 22 years' experience in corporate finance and has advised a diverse range of mining and resource companies during his career at Patersons Securities Limited, one of Australia's largest full-service stockbroking and financial services firms. He has been instrumental in managing and structuring equity capital raisings as well as having advised extensively in the area of mergers and acquisitions.

Directorships held in other listed entities in the last three years:

He also holds, or has held, directorships in the following ASX listed companies in the last three years:

- Alicanto Minerals (appointed 7 August 2020)
- Auteco Minerals (appointed 28 January 2020)
- Galilee Energy Limited (appointed 2 December 2013).
- Bellevue Gold Limited (resigned 9 September 2019); and
- Estrella Resources Limited (resigned 1 February 2019).

(c) ANDREW SEATON

Non-Executive Director (appointed 16 August 2019)

Special Responsibilities:

Chairman of Audit Committee

Member of the Remuneration and Nomination Committee

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Experience:

Andrew is an experienced energy executive with a background in finance, project management and investment banking. Andrew was a senior executive with Santos Limited for twelve years, the last six of which he served as Chief Financial Officer. Prior to joining Santos, Andrew worked in investment banking with Merrill Lynch in Melbourne and New York. His early career included 10 years as a process engineer and project manager across a range of upstream oil and gas projects and operating plants. Andrew has an Honours Degree in Chemical Engineering and a Graduate Diploma in Business Administration.

Directorships held in other listed entities in the last three years:

He also holds, or has held, directorships in the following ASX listed companies in the last three years:

- Strike Energy Limited (appointed 18 August 2017).
- Rex Minerals Limited (appointed 1 December 2021)

(d) ALLAN RITCHIE

Non-Executive Director (appointed 6 April 2017, resigned 26 May 2021)

Special responsibilities:

Member of the Audit Committee

Experience:

Allan has served as a director of several private and public listed companies and is a principal of his own firm where he focuses on asset acquisitions and off-take arrangements in the energy, resources and infrastructure space. Allan is an investment banking professional with a career spanning 30 years of origination and structuring. He held senior positions at Westpac, ANZ Bank, HSBC and BNP Paribas in London, New York and Asia Pacific. He engages with the chief executives of major corporations and state-owned enterprises spanning the global resources, energy and infrastructure sectors. He was previously voted number one in the BRW Magazine poll of Financial Markets, bankers in Australia.

Allan graduated from the University of Technology Sydney with a Bachelor of Business and has a post graduate Diploma in Applied Finance from FINSIA.

Directorships held in other listed entities in the last three years:

He also holds, or has held, directorships in the following ASX listed companies in the last three years:

- Adavale Resources Limited (resigned 10 December 2019).

(e) NICK CASTELLANO

Executive Director (appointed 6 April 2017)

Special responsibilities:

Member of the Remuneration and Nomination Committee
Chairman of the Technical Advisory Board

Experience:

Nick is a Hydrocarbon Dynamics founder and is the inventor of the HCD Multi-Flow® technology. Nick spent a decade in the nuclear power program of the United States Navy, ultimately becoming the leading chief of the reactor laboratory division of the nuclear powered aircraft carrier the Dwight D. Eisenhower, where he assumed responsibilities for chemistries in the reactor plants. After leaving, Nick developed cutting edge chemistry and patented processes in the industrial water and oil industries. In the industrial water industry Nick founded an industrial water treatment company with clients such as Pepsi Cola, Coca Cola and United Dairymen. In the oil industry Nick focused on oil well chemistry, developing and founding the technology of HCD. Nick has a Bachelor of Science Degree in Biochemistry, a Masters Degree in Biochemistry and completed his MA PHD at Canterbury University.

Directorships held in other listed entities in the last three years:

None.

2. COMPANY SECRETARY

Ms Julie Edwards was appointed Company Secretary on 1 July 2016 and continues in office at the date of this report.

Julie holds a Bachelor of Commerce degree, is a member of CPA Australia and holds a Public Practice Certificate. Ms Edwards is a director and manager of Lowell Accounting Services and also provides company secretarial services for a number of other ASX listed companies and unlisted companies.

3. DIRECTORS' MEETINGS

The number of meetings of the Board and of each Board Committee held during the year (while each Director was a Director or committee member) and the number of meetings attended by each director are set out below:

	Board Of Directors		Audit Committee		Remuneration & Nomination Committee	
	Held	Attended	Held	Attended	Held	Attended
Stephen Mitchell	12	12	-	-	-	-
Nicholas Castellano	12	12	-	-	-	-
Ray Shorrocks	12	10	2	2	-	-
Allan Ritchie	5	3	1	-	-	-
Andrew Seaton	12	11	2	2	-	-

This disclosure is made in accordance with s.300(10)(c) of the Corporations Act 2001.

4. REMUNERATION REPORT - AUDITED

The directors of the Group present the Remuneration Report, prepared in accordance with section 300A of the *Corporations Act 2001*, AASB124 *Related Party Disclosures* and Principle 8 of the ASX Corporate Governance Principles and Recommendations. This report outlines the remuneration arrangements in place for the Non-executive Directors, Executive Directors and other Key Management Personnel of the Group.

This report has been audited, as required by section 308(3C) of the *Corporations Act 2001*.

Remuneration Committee

The Board has established a Remuneration Committee which provides advice and specific recommendations on the remuneration packages and other terms of employment for Executive Directors, other senior executives; and Non-executive Directors including:

- the level of Non-executive Director fees;
- the amount and nature of remuneration arrangements for Executive Directors and other executives; and
- the type and nature of incentive arrangements including key performance targets effecting the remuneration of the executive team.

The objective of the Remuneration Committee is to ensure that the remuneration policies and arrangements are designed to ensure that the level and composition of remuneration is competitive, reasonable and appropriate for the results delivered and to attract and maintain talented and motivated directors and employees.

The level of remuneration and other terms and conditions of employment for Executive Directors and Company executives are reviewed annually having regard to performance and relevant comparative information, and are approved by the Board after the Remuneration Committee has sought independent professional advice, as required. In this respect, consideration is given to normal commercial rates of remuneration for similar levels of responsibility.

The Corporate Governance Statement provides further information on the role of this Committee.

Key Management Personnel

Key Management Personnel includes:

Stephen Mitchell	Non-Executive Chairman
Nicholas Castellano	Executive Director
Ray Shorrocks	Non-executive Director
Allan Ritchie	Non-executive Director (resigned 26 May 2021)
Andrew Seaton	Non-executive Director
William Tarantino	CEO – Chemical Division
Julie Edwards ¹	Company Secretary and Financial Controller

1. Julie Edwards is remunerated via an external accounting firm, Lowell Accounting Services Pty Ltd.

Non-executive Director Remuneration

The Board's policy is to remunerate Non-executive Directors at market rates for time, commitment and responsibilities. The Remuneration Committee determines payments to the Non-executive Directors and reviews their remuneration annually, based on market practice, duties and accountability. Independent external advice is sought when required. No advice was sought during the 2021 financial year.

The maximum aggregate amount of fees that can be paid to Non-executive Directors is subject to approval by shareholders at the Annual General Meeting. The latest determination was in the ASX announcement on 4 February 2016 after shareholders approved an aggregate pool limit of \$300,000.

Fees for Non-executive Directors include a base director fee, performance rights for service tenure, and performance rights based on the performance of the Group. Further, to align the Directors' interests with shareholder interests, the Directors are encouraged to hold shares in the Group. There is no minimum holding prescribed in the Constitution.

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Non-executive Directors' fees (inclusive of superannuation) have generally been paid on the following basis:

Director fees	2021	2020
	\$	\$
Base fees	36,000	30,000
Chair of the Board	72,000	72,000
Chair of a committee	12,000	12,000
Member of a committee	6,000	6,000

Andrew Seaton's non-executive director fees were paid in shares from 1 April 2020 to 31 December 2020 with the number of shares based on the Volume Weighted Average Price over the last 20 trading days of the month as it relates to each monthly payment. All other non-executive director fees were suspended from 1 April 2020 to 31 December 2020.

Executive Remuneration Policy

The objective of the executive remuneration policy is to ensure that the Group's remuneration arrangements are competitive and reasonable, enabling it to attract and retain the right calibre of staff and to align the remuneration of Executive Directors and other executives with shareholder and business objectives. Executive remuneration arrangements comprise a fixed remuneration component and may also include specific long-term incentives based on key performance areas affecting the Group's financial and/or operational results as follows:

- (a) a base salary (which is based on factors such as length of service, qualifications and experience), superannuation, fringe benefits and performance incentives;
- (b) short-term performance incentives in the form of cash or equity bonuses which are paid only when predetermined key performance indicators have been met. These reflect the achievement of a number of short term goals established on an annual basis;
- (c) executives engaged through professional service entities are paid fees based on an agreed market based hourly rate for the services provided and may also be entitled to short term performance based incentives; and
- (d) long-term performance-based incentives comprising performance rights which are designed to align the remuneration of executives with the business objectives of the Group and its shareholders. LTIs may be delivered in an equity award(s), which is granted upon the satisfaction of performance conditions/key performance indicators.

The Remuneration Committee reviews executive remuneration arrangements annually by reference to the Group's performance, executive performance and comparable information from industry sectors. Such a review may include, but not limited to, changing the total proportion of executive remuneration which is 'at-risk', the payment of short term/long term incentives and the proportion of the risk remuneration between short term/long term incentives.

Executive and Non-executive Directors and other employed executives receive the superannuation guarantee contribution required by the Commonwealth Government. For the year ended 31 December 2021 the rate was 10% up to a maximum contribution of \$23,568 per person. Executive and Non-executive Directors and other employed executives do not receive any other retirement benefits, however, some individuals may choose to sacrifice part of their salary to increase payments towards superannuation.

All remuneration paid is valued at either cost or the fair value to the Group and expensed.

Summary of Executive Remuneration

Name / position	Contract	Terms per annum	Total remuneration per annum
Nicholas Castellano Executive Director	Yes	US\$180,000 per annum until 31 March 2020, reduced to US\$120,000 from 1 April 2020. Remuneration increases to US\$180,000 once the Group achieves at least three consecutive months of 40 HCD drum sales. Contract ended on 1 April 2021, upon which any party may terminate the agreement by giving at least 2 months notice. No termination benefits apply other than outstanding and owing consultant fees at the date of termination.	US\$120,000
William Tarantino CEO Chemical Division	Yes	US\$235,000 per annum. Contract ended on 1 September 2021 and was automatically renewed for 1 year. Employee's contract may be terminated at any time by the Group without cause or by voluntary resignation by the employee, provided that 90 days notice is given. Employee is entitled to 3 months of base salary plus unreimbursed expenses, accrued leave or other entitlements.	US\$235,000

Total Reward Mix

The amount of remuneration 'at-risk' is generally expressed as a proportion of fixed remuneration and is related to the agreement on remuneration between the Group and the executive, the Group's expectations of executive performance, and the executive's position in the Group. The proportion of fixed remuneration will generally not change on a year to year basis, but may be reviewed and modified by the Board.

Fixed remuneration (including the superannuation levy payable as employer contribution) is set with reference to market data, reflecting the scope of the role and the performance of the person in the role.

The mix of short term and long term incentives offered to executives will depend on their position in the Group. Generally, long term incentives are only offered to members of the senior executive team and short term incentives are only offered to other employees. Short and long term incentives are classified as 'at-risk' remuneration.

The Board believes that remuneration arrangements for executives should typically incorporate an at-risk component which is performance related and rewards employees for the achievement of goals which contribute to shareholder wealth. The Board believes that such arrangements should both incentivise and reward performance of executives that adds value to the Group for all shareholders.

Share Trading Policy

Shares issued under any of the Group's employee equity plans are subject to, and conditional upon, compliance with the Group's Securities Trading Policy. Executives are prohibited from limiting risk attached to those instruments by use of derivatives or other means. The Group's equity plan participants are required to confirm that they have not entered into any such prohibited transactions.

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Details of Remuneration

Details of remuneration of each of the Key Management Personnel of the Group during the financial year are set out in the following table:

	YEAR	SHORT TERM BENEFITS		LONG TERM BENEFITS	POST EMPLOYMENT SUPER-ANNUATION	EQUITY BASED PAYMENTS		TOTAL	PERFORMANCE RELATED ³
		CASH, SALARY & FEES	RELATED PARTY FEES ¹			PERFORMANCE RIGHTS ²	SHARES IN LIEU OF CASH ³		
		\$	\$			\$	\$		
NON-EXECUTIVE DIRECTORS									
Stephen Mitchell ⁴	2021	30,352	-	(5,330)	3,273	(66,048)	-	(37,753)	-
	2020	-	-	-	-	73,419	-	73,419	100%
Ray Shorrocks	2021	-	51,993	-	-	(37,742)	-	14,251	-
	2020	-	12,000	-	-	55,888	-	67,888	82%
Allan Ritchie	2021	-	-	-	-	(28,306)	-	(28,306)	-
	2020	-	12,000	-	-	41,916	-	53,916	78%
Andrew Seaton	2021	54,000	-	-	-	(37,742)	-	16,258	-
	2020	13,500	-	-	-	55,888	40,500	109,888	51%
EXECUTIVE DIRECTORS									
Stephen Mitchell ⁴	2021	-	-	-	-	-	-	-	-
	2020	50,000	-	2,064	4,750	24,384	-	81,198	30%
Nicholas Castellano	2021	160,004	-	-	-	(28,306)	-	131,698	-
	2020	-	197,667	-	-	41,916	-	239,583	17%
OTHER KEY MANAGEMENT									
William Tarantino	2021	334,224	-	-	-	(42,128)	-	292,096	-
	2020	356,741	-	-	-	75,740	-	432,481	18%
TOTAL	2021	578,580	51,993	(5,330)	3,273	(240,272)	-	388,244	
TOTAL	2020	420,241	221,667	2,064	4,750	369,151	40,500	1,058,373	

1. Remuneration paid via Director related entities.
2. All performance-related incentives are long term. The performance rights for 2021 are in credit as non-market-based performance rights did not meet their vesting conditions during the year and were therefore credited to the expense.
3. Andrew Seaton's non-executive director fees were paid in shares from 1 April 2020 to 31 December 2020 with the number of shares based on the Volume Weighted Average Price over the last 20 trading days of the month as it relates to each monthly payment.
4. Stephen Mitchell was an Executive Chairman until 31 March 2020 upon which he became a Non-executive Chairman.

Comparison of Key Management Personnel Remuneration to Group Performance

The table below shows the total remuneration cost of the Key Management Personnel, earnings per ordinary share (EPS), dividends paid or declared, and the closing price of ordinary shares on ASX at year end for the current year and previous four years.

Relation to performance	2021	2020	2019	2018	2017
Total remuneration (\$)	388,244	1,058,373	833,502	1,115,683	1,273,905
EPS (loss) cents	(0.76)	(0.62)	(1.26)	(2.09)	(2.50)
Dividends paid	-	-	-	-	-
Share price at year end (cents)	0.013	0.03	0.09	0.14	0.08

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Director Interests

The relevant interest of each director in the shares, debentures, interests in registered schemes and rights or options over such instruments issued by the companies within the Group, as notified by the directors to the Australian Securities Exchange in accordance with *S205G(1) of the Corporations Act 2001 and Reg. 2M.3.03(1) of the Corporations Regulations 2001*, at balance date of this report is as follows:

Director	Ordinary shares	Unlisted options (expiring 31-Oct-22)	Performance rights (expiring 1-Sep-21)
Stephen Mitchell	44,780,499	3,131,708	-
Nicholas Castellano	6,168,140	-	-
Ray Shorrocks	6,369,230	514,103	-
Allan Ritchie	-	-	-
Andrew Seaton	4,688,960	355,591	-

There are no contracts to which a director is a party or under which a director is entitled to a benefit that confer a right for the director to call for shares in HCD.

Key Management Personnel Shareholdings

The number of ordinary shares in the Group held by each of the Key Management Personnel of the Group is as follows:

KMP	Balance at beginning of the year	Shares purchased	Shares sold	Other	Balance at end of the year
Stephen Mitchell	44,780,499	-	-	-	44,780,499
Nicholas Castellano	6,168,140	-	-	-	6,168,140
Ray Shorrocks	6,374,730	-	(5,500)	**(20,000)	6,349,230
Allan Ritchie	4,200,926	-	-	*(4,200,926)	-
Andrew Seaton	4,267,085	421,875	-	-	4,688,960
William Tarantino	2,000,000	-	-	-	2,000,000
Julie Edwards	84,000	-	-	-	84,000

* Allan Ritchie resigned as a director on 26 May 2021 and is therefore no longer a key management personnel.

** an entity ceased being a related party of Ray Shorrocks during the year.

Unlisted Options

The movements in the current year of the number of options held by Key Management Personnel are as follows:

KMP	Balance at beginning of the year	Acquired during the year	Number of options exercised	Other	Number at end of year
Stephen Mitchell	3,131,708	-	-	-	3,131,708
Ray Shorrocks	514,103	-	-	-	514,103
Allan Ritchie	350,451	-	-	*(350,451)	-
Andrew Seaton	355,591	-	-	-	355,591
Julie Edwards	12,000	-	-	-	12,000

* Allan Ritchie resigned as a director on 26 May 2021 and is therefore no longer a key management personnel.

All unlisted options are vested and are exercisable at \$0.03/option. The options expire on 31 October 2022.

Unlisted options were issued under the Rights Issue Prospectus dated 21 October 2020. One free option was allocated for every two shares subscribed for under the Rights Issue. Therefore the options were not granted as remuneration and are not considered as a share-based payment, as they are part of a capital issue applicable to all shareholders.

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Performance Rights

The terms and conditions of each grant of performance rights outstanding during the year affecting remuneration in the current or a future period with respect to Key Management Personnel are shown in the table below.

KMP	Grant date	# of PRs	Expiry date	Vesting date	Exercise price	Fair value	Performance condition	Vested %
Stephen Mitchell	11-Dec-19	1,750,000	1-Sep-21	1-Sep-21	\$nil	\$0.02	Share price exceeding 15 cents for any consecutive 3 month prior to 1 Sept 2021.	0%
Stephen Mitchell	11-Dec-19	1,750,000	1-Sep-21	1-Sep-21	\$nil	\$0.08	Sales revenue from the sale of Multi-Flow® exceeding US\$900,000 over any 3 consecutive months prior to 1 Sept 2021.	0%
Nicholas Castellano	11-Dec-19	750,000	1-Sep-21	1-Sep-21	\$nil	\$0.02	Share price exceeding 15 cents for any consecutive 3 month prior to 1 Sept 2021.	0%
Nicholas Castellano	11-Dec-19	750,000	1-Sep-21	1-Sep-21	\$nil	\$0.08	Sales revenue from the sale of Multi-Flow® exceeding US\$900,000 over any 3 consecutive months prior to 1 Sept 2021.	0%
Ray Shorrocks	11-Dec-19	1,000,000	1-Sep-21	1-Sep-21	\$nil	\$0.02	Share price exceeding 15 cents for any consecutive 3 month prior to 1 Sept 2021.	0%
Ray Shorrocks	11-Dec-19	1,000,000	1-Sep-21	1-Sep-21	\$nil	\$0.08	Sales revenue from the sale of Multi-Flow® exceeding US\$900,000 over any 3 consecutive months prior to 1 Sept 2021.	0%
Allan Ritchie	11-Dec-19	750,000	1-Sep-21	1-Sep-21	\$nil	\$0.02	Share price exceeding 15 cents for any consecutive 3 month prior to 1 Sept 2021.	0%
Allan Ritchie	11-Dec-19	750,000	1-Sep-21	1-Sep-21	\$nil	\$0.08	Sales revenue from the sale of Multi-Flow® exceeding US\$900,000 over any 3 consecutive months prior to 1 Sept 2021.	0%
Andrew Seaton	11-Dec-19	1,000,000	1-Sep-21	1-Sep-21	\$nil	\$0.02	Share price exceeding 15 cents for any consecutive 3 month prior to 1 Sept 2021.	0%
Andrew Seaton	11-Dec-19	1,000,000	1-Sep-21	1-Sep-21	\$nil	\$0.08	Sales revenue from the sale of Multi-Flow® exceeding US\$900,000 over any 3 consecutive months prior to 1 Sept 2021.	0%
William Tarantino	8-Jan-20	1,250,000	1-Sep-21	1-Sep-21	\$nil	\$0.03	Share price exceeding 15 cents for any consecutive 3 month prior to 1 Sept 2021.	0%
William Tarantino	8-Jan-20	1,250,000	1-Sep-21	1-Sep-21	\$nil	\$0.08	Sales revenue from the sale of Multi-Flow® exceeding US\$900,000 over any 3 consecutive months prior to 1 Sept 2021.	0%
Julie Edwards ¹	8-Jan-20	250,000	1-Sep-21	1-Sep-21	\$nil	\$0.03	Share price exceeding 15 cents for any consecutive 3 month prior to 1 Sept 2021.	0%
Julie Edwards ¹	8-Jan-20	250,000	1-Sep-21	1-Sep-21	\$nil	\$0.08	Sales revenue from the sale of Multi-Flow® exceeding US\$900,000 over any 3 consecutive months prior to 1 Sept 2021.	0%

1. Issued to Invisage Super Pty Ltd, a related entity of Julie Edwards.

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The movements in the current year of the number of performance rights granted to Key Management Personnel are as follows:

KMP	Grant date	Vesting date	Number at beginning of year	Granted during the year	Number of rights vested	Number of rights lapsed	Number at end of year
Stephen Mitchell	11-Dec-19	1-Sep-21	3,500,000	-	-	(3,500,000)	-
Nicholas Castellano	11-Dec-19	1-Sep-21	1,500,000	-	-	(1,500,000)	-
Ray Shorrocks	11-Dec-19	1-Sep-21	2,000,000	-	-	(2,000,000)	-
Allan Ritchie	11-Dec-19	1-Sep-21	1,500,000	-	-	(1,500,000)	-
Andrew Seaton	11-Dec-19	1-Sep-21	2,000,000	-	-	(2,000,000)	-
William Tarantino	8-Jan-20	1-Sep-21	2,500,000	-	-	(2,500,000)	-
Julie Edwards ¹	8-Jan-20	1-Sep-21	500,000	-	-	(500,000)	-

1. Issued to Invisage Super Pty Ltd, a related entity of Julie Edwards.

Related Party Transactions

During the year, the Group paid the following amounts to related party entities:

- \$51,993 (2020: \$12,000) of board fees to Spring Street Holdings Pty Ltd, a company associated with Ray Shorrocks.
- Nil (2020: \$12,000) to True Success Pty Ltd, a company associated with Allan Ritchie.
- \$160,004 (2020: \$197,667) of salaries and wages and \$256,446 (2020: \$280,826) of royalties to NC2 LLC, a company associated with Nicholas Castellano. The Group has an outstanding payable of \$nil (2020: \$24,333) to NC2 LLC at balance date.
- \$144,000 (2020: \$136,500) was invoiced from Lowell Accounting Services for accounting and secretarial services and rent, an entity of which Stephen Mitchell and Julie Edwards are Directors. \$13,750 (2020: \$7,350) remains payable at balance date.
- \$27,750 (2020: \$55,500) of related party transactions were settled via the issue of shares. Refer to note 14 for further information.

Transactions between related parties are on normal commercial terms and conditions no more favourable than those available to other parties unless otherwise stated.

END OF AUDITED REMUNERATION REPORT

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5. PRINCIPAL ACTIVITIES

The principal activities of the Group during the year under review were sales and marketing of HCD's proprietary products as well as the evaluation of oil projects and energy technologies in North America and internationally.

The Group disposed of its existing exploration tenements during the year. An interest in a project located in Kentucky, USA expired in January 2021 and another interest in Utah, USA was sold in September 2021 for cash consideration of US\$500,000 (AU\$676,890) and an ongoing 2% revenue-based royalty.

There have been no other significant changes in the nature of the Group's principal activities during the financial year.

6. REVIEW OF OPERATIONS AND FINANCIAL POSITION/RESULTS

Projects and Activities

Hydrocarbon Dynamics' oilfield chemical technology remediates and inhibits the paraffins and asphaltenes that cause detrimental deposits which block reservoirs, wellbores, production tubing, transfer lines, processing equipment, and storage tanks. This technology can improve operator safety, lower environmental and economic risks, reduce operating costs, and increase operational efficiency and can be applied to: 1) lowering the temperature at which paraffin that occurs naturally in some crude oils solidifies (or crude oil pour point); 2) improve oil flow rates in wells and pipelines producing or transporting viscous crudes; 3) enhance production by reversing formation damage resulting in increased field recovery and economics, 4) reduce the requirement of expensive light crude oil (diluent) traditionally mixed in with the viscous crudes to enable them to be pumped from the reservoir and to meet pipeline viscosity and gravity specifications and; 5) recover saleable oil from sludge in storage facilities.

Sales and Marketing Activities

HCD's strategy includes focusing efforts on geographical locations that will provide the greatest probability of success while maintaining a strong sales pipeline with emphasis on continuous, larger volume applications such as ongoing inhibition treatments and heavy oil viscosity/diluent reduction. North America remains a key focal point as it represents the largest paraffin and asphaltene chemical control market globally. As part of this strategic plan, considerable effort was maintained in identifying and appointing new agents and distributors, assisting in the sales efforts of existing ones, and indirect sales efforts to shorten the sales cycle.

Cooper Basin Trial

A 6-month pilot test was successfully completed in 2021 utilizing HCD Multi-Flow to control paraffin deposition in flowlines, tanks and an export line for a mid-cap producer.

- Significant improvement in downtime and oil losses was observed in the period HCD Multi-Flow was trialed at the three 'trouble' wells.
- In the two produced oil tanks treated, no further discernible build-up of sludge was observed.
- The producer's export pipeline team reported positive impacts on pigging operations from the addition of HCD Multi-Flow, even though only 55% of the total crude stream was treated during the trial.

HCD received very positive feedback and awaits final word on the disposition of the 2022 chemical treatment season.

HCD is connecting with other producers in the region with similar production issues to communicate the success of the technology and look for additional opportunities.

North America Activity

HCD is working with several distributors focused on Texas based opportunities in the Permian Basin and Eagle ford Shale, Oklahoma, and Colorado. HCD has also started working with a mid-cap producer in the Gulf of Mexico with the goal of trialling HCD Multi-Flow on wells where they scrape paraffin daily.

HCD is progressing with a US supermajor oil and gas company who is currently laboratory testing HCD's chemistry to evaluate its ability to reduce viscosity of heavy oil from their Athabasca region oil sands, one of the largest oil sands deposits in Canada. The purpose of the testing is to evaluate the technology's ability to lower crude oil viscosity and reduce diluent requirements. Positive results will lead to discussions with operators for the purpose of running a pilot test. Other dialogue with this Supermajor includes identifying an asset to trial HCD's technology for paraffin control, including land based (Permian) and offshore assets.

One of HCD's Texas based distributors kicked off a paraffin control trial in a North Central Texas oil field on 23 December 2021. The start-up of a second, untreated well into the flowline downstream of the well being trialled resulted in pressure increase, interfering with the trial. The distributor was unaware that two additional wells were tied into the flowline of the well being trialled. These two wells were not being continuously treated with chemical and the trial was therefore ended after 3 weeks. HCD's distributor is searching for a different, isolated trial location. A paraffin coupon used to monitor the well being trialled was inspected and observed to be clean.

The Distributor's Vice President of Technical Services and Manager of Technology Development remain excited about HCD's technology. They are actively looking for multiple locations to trial the technology and another trial is expected to start in the coming months.

There is renewed emphasis on Alberta, Canada paraffin control opportunities with a new Canadian distributor who is lab testing HCD Multi-Flow prior to a potential springtime trial in the Cardium field. A second distributor is tendering HCD Multi-Flow in the Montney and Cardium field applications.

Colombia Activity

HCD's India based distributor, with a significant presence in South America, is making headway with a leading independent Latin American oil and gas operator toward a trial. The purpose of the trial is to eliminate the costly diluent added to their heavy Colombian crude oil to meet pipeline viscosity specifications. This opportunity follows positive laboratory testing to assess the chemistry's ability to reduce the viscosity of the producer's heavy oil.

India Activity

Advanced discussions are taking place between HCD's India based distributor and a large private sector producer in India for the treatment of a significant crude oil pipeline. The interest is to reduce or eliminate the need for heat addition to the pipeline which is needed to maintain flow. This producer has request laboratory testing before proceeding to a trial and wax flow loop testing is being considered as it better replicates actual field conditions.

HCD's Agent in India is close to closing a pilot test with a national oil and gas company in India for paraffin control and production enhancement.

North Sea Activity

As previously reported, success of head-to-head laboratory evaluation of HCD Multi-Flow against the incumbent supplier's chemistries, HCD was given a verbal commitment to trial HCD's technology upon achieving the product registrations and approvals required to operate in the North Sea. HCD continues to make progress but has been hampered by delays due to Covid. A successful trial could lead to a second platform that is plagued with similar paraffin issues.

APAC Activity

A potential project with an APAC national oil company for onshore hydrocarbon recovery through effective treatment of sludge was uncovered by HCD's APAC Agent. The first step is laboratory screening of HCD's Kleen-Flow technology.

Middle East & Africa Activity

HCD's new Dubai based distributor is targeting opportunities in the Middle East and Africa with a focus on tank cleaning, paraffin & asphaltene well remediation, and inhibition. This distributor is in discussions with a North African national oil company with a focus on HCD's Kleen-Flow tank cleaning technology. They have also expressed interest in other areas where HCD Multi-Flow technology may be used to solve issues and provide value in their production, transportation, and storage systems.

Testing Update

Laboratory testing remains a continuing and important part of HCD's product development and marketing with the current focus being umbilical certification and CEFAS certification and Flow Loop Testing of HCD Multi-Flow for a large offshore project across the world application.

CEFAS certification documentation, which is required for HCD to progress the North Sea opportunity is now at the end stages of attaining approval.

HCD is performing Flow Loop testing with several companies in order to move forward with trials overseas and domestically.

Umbilical certification tests are currently in progress results should be realized around mid-March.

HCD Multi-Flow has attained UK REACH certification as required for the North Sea project.

HCD Oil Projects

The Group had an interest in a project located in Kentucky, USA which expired in January 2021 and another interest in the Utah, USA which it sold in September 2021 for cash consideration of US\$500,000 (AU\$676,890) and an ongoing 2% revenue-based royalty. The purchaser has also committed to test HCD's technology in three wells in the project area within six months of the completion of the sale.

The Group has no tenement interests at the date of this report.

HCD continues to review upstream and other energy innovation investment opportunities.

7. SIGNIFICANT AFFAIRS

There have not been any significant changes in the state of affairs of the Group for the financial year ended 31 December 2021.

8. LIKELY DEVELOPMENTS

The Group intends to continue its principal activities of selling and marketing its HCD products as well as seeking opportunities to acquire, dispose, explore and develop energy prospects and related technologies.

9. DIVIDENDS PAID OR RECOMMENDED

The Directors recommend that no dividend be paid or declared at this point in time. No amounts have been paid or declared by way of dividend during the financial year.

10. ENVIRONMENTAL REGULATIONS AND PERFORMANCE

The Group is subject to various environmental regulations in relation to the export and transport of its HCD products internationally.

The Board believes that the Group has adequate systems in place for the management of its environmental requirements and is not aware of any breach of those environmental requirements as they apply to the Group. No government agency has notified the Group of any environmental breaches during the period ended 31 December 2021.

11. UNISSUED SHARES UNDER OPTION

The Group has the following unissued shares under option outstanding at the date of the Directors' Report:

Description	Issue date	# of options	Expiry date	Issue price	Exercise price	Vested %
Share options for purchase of ordinary shares	23 & 27 November 2020	46,269,645	31-Oct-22	\$nil	\$0.03	100%

The unissued shares under option do not carry voting rights.

No shares were issued during the reporting period or up to the date of this report on exercise of options.

Refer to Note 14 for further information and the Remuneration Report for options granted to key management personnel.

12. INDEMNIFICATION AND INSURANCE OF OFFICERS AND AUDITORS

Directors, executives and the company secretaries are indemnified by the Group against any liability incurred in their capacity as an officer of the Group or a related body corporate to the maximum extent permitted by law. The Group has not paid any premiums in respect of any contract insuring the directors of the Group against a liability for legal costs.

The Group has not paid any premiums in respect of any contract insuring its auditor against a liability incurred in that role as an auditor of the Group. In respect of non-audit services, Pitcher Partners have the benefit of an indemnity to the extent they reasonably rely on information provided by the Group which is false, misleading or incomplete. No amount has been paid under this indemnity during the financial year ending 31 December 2021 or to the date of this Report.

13. NON-AUDIT SERVICES

The Group may decide to employ the auditor on assignments additional to their statutory audit duties where the auditor's expertise and experience with the Group are important.

The following fees were paid or payable for services provided by Pitcher Partners, the auditor of the Group:

	2021	2020
	\$	\$
Auditing or reviewing the financial statements	56,000	55,000
Non-audit services	-	-
	56,000	55,000

This disclosure is made in accordance with s.300(2A)(11B(a)) and (11C(b)) of the *Corporations Act 2001*.

The Board of Directors will continuously consider the position and, in accordance with advice received from the Audit Committee, ensure that the provision of the non-audit services is compatible with the general standard of independence for auditors imposed by the *Corporations Act 2001*. The Directors are satisfied that the provision of non-audit services (where applicable) by the auditor, does not compromise the auditor independence requirements of the *Corporations Act 2001* for the following reasons:

- all non-audit services will be reviewed to ensure they do not impact the impartiality and objectivity of the auditor; and
- none of the services (where applicable) undermine the general principles relating to auditor independence as set out in APES 110 *Code of Ethics for Professional Accountants (including Independence Standards)*.

The auditor's independence declaration under section 307C of the *Corporations Act 2001* forms a part of the Annual Report for the year ended 31 December 2021.

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14. PROCEEDINGS ON BEHALF OF THE GROUP

No person has applied for leave of Court under section 237 of the *Corporations Act 2001* to bring proceedings on behalf of the Group or intervene in any proceedings to which the Group is a party for the purpose of taking responsibility on behalf of the Group for all or any part of those proceedings. The Group was not a party to any such proceedings during the year.

15. ROUNDING OFF

The Group is of a kind referred to in *ASIC Corporations (Rounding in Financial / Directors' Reports) Instrument 2016/191* and in accordance with that instrument, amounts in the financial report and directors' report have been rounded off to the nearest dollar, unless otherwise stated.

16. COVID

COVID-19 caused significant delays and setbacks in 2021, particularly in areas such as Canada. HCD is seeing the easing of COVID restrictions providing positive momentum in 2022.

17. EVENTS SUBSEQUENT TO REPORTING DATE

The Company issued a pro rata non-renounceable entitlement offer for one new share for every three shares held by Eligible Shareholders at an issue price of \$0.011 per share which closed on 14 March 2022. The total amount raised was \$1,078,232 for a total of 98,021,075 new shares. Peloton Capital has been engaged to place the shortfall.

In the opinion of the directors, there are no other events that have arisen in the interval between the end of the financial year and the date of this report that has significantly affected, or may significantly affect the Group's operations, results or the state of affairs in future financial years.

This report is signed in accordance with a resolution of the directors.



Stephen Mitchell
Chairman
Melbourne, Victoria
30 March 2022

The Directors
Hydrocarbon Dynamics Limited
Level 6, 412 Collins Street
Melbourne VIC 3000

Auditor's Independence Declaration

In relation to the independent audit for the year ended 31 December 2021, to the best of my knowledge and belief there have been:

- (i) No contraventions of the auditor independence requirements of the *Corporations Act 2001*; and
- (ii) No contraventions of APES 110 *Code of Ethics for Professional Accountants (including Independence Standards)*.

This declaration is in respect of Hydrocarbon Dynamics Limited and the entities it controlled during the year.

PITCHER PARTNERS



JASON EVANS
Partner

Brisbane, Queensland
30 March 2022

HYDROCARBON DYNAMICS LIMITED
(ABN 75 117 387 354)

CONSOLIDATED STATEMENT OF PROFIT OR LOSS AND OTHER COMPREHENSIVE INCOME
FOR THE YEAR ENDED 31 DECEMBER 2021

	Note	Group	
		2021	2020**
		\$	\$
REVENUE AND OTHER INCOME			
Revenue from contracts with customers	5	64,192	181,595
Other income	5	150,232	271,890
		214,424	453,485
EXPENSES			
Director and employee related costs	5	(655,840)	(732,291)
Share-based payment reversal / (expense)	14	257,964	(484,211)
General and administration costs		(413,504)	(305,797)
Royalties	21	(256,446)	(280,826)
Accounting and audit fees		(192,101)	(152,476)
Insurance costs		(156,577)	(161,253)
Productions costs		(149,359)	(126,621)
Professional consultant and contractor fees		(102,694)	(243,657)
Bad and doubtful debts		(43,637)	(4,872)
Depreciation and amortisation costs	5	(28,425)	(1,057)
Finance expenses		(7,930)	(5,463)
Impairment costs		(2,156,902)	-
		(3,905,451)	(2,498,524)
LOSS BEFORE INCOME TAX FROM CONTINUING OPERATIONS			
		(3,691,027)	(2,045,039)
Income tax benefit/(expense)	6	-	-
LOSS FROM CONTINUING OPERATIONS			
		(3,691,027)	(2,045,039)
Profit/(loss) from discontinued operation	7	326,588	(7,226)
LOSS FOR THE YEAR			
		(3,364,439)	(2,052,265)
OTHER COMPREHENSIVE INCOME, NET OF INCOME TAX			
Items that may be reclassified subsequently to profit or loss:			
Exchange differences on translation of foreign operations		28,302	(54,994)
TOTAL OTHER COMPREHENSIVE LOSS, NET OF INCOME TAX			
		28,302	(54,994)
TOTAL COMPREHENSIVE LOSS FOR THE YEAR			
		(3,336,137)	(2,107,259)
Loss attributable to owners of the parent		(3,364,439)	(2,052,265)
Comprehensive loss attributable to owners of the parent		(3,336,137)	(2,107,259)
Earnings per share for loss from continuing operations and for the year attributable to the ordinary equity holds of the company			
Basic loss per share (cents)	17	(0.84)	(0.62)
Diluted loss per share (cents)	17	(0.84)	(0.62)
Earnings per share for loss attributable to the ordinary equity holders of the company:			
Basic loss per share (cents)	17	(0.76)	(0.62)
Diluted loss per share (cents)	17	(0.76)	(0.62)

** the prior period comparative has been restated for a change in the presentation of the discontinued operation in the current period.

The above Statement of Profit or Loss and Other Comprehensive Income should be read in conjunction with the accompanying notes.

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HYDROCARBON DYNAMICS LIMITED
(ABN 75 117 387 354)

CONSOLIDATED STATEMENT OF FINANCIAL POSITION
AS AT 31 DECEMBER 2021

	Note	Group 2021 \$	Group 2020 \$
ASSETS			
CURRENT ASSETS			
Cash and cash equivalents	8	1,393,960	2,442,306
Trade and other receivables	9	40,066	163,951
Other current assets		82,896	126,890
Inventory	10	543,864	556,481
TOTAL CURRENT ASSETS		2,060,786	3,289,628
NON-CURRENT ASSETS			
Exploration and evaluation expenditure	11	-	244,868
Plant and equipment		2,158	2,907
Intangible assets	12	1,789,215	3,969,829
TOTAL NON-CURRENT ASSETS		1,791,373	4,217,604
TOTAL ASSETS		3,852,159	7,507,232
CURRENT LIABILITIES			
Trade and other payables	13	134,692	175,451
Provisions		45,255	47,812
Borrowings		-	10,404
TOTAL CURRENT LIABILITIES		179,947	233,667
NON-CURRENT LIABILITIES			
Provisions		-	5,330
TOTAL NON-CURRENT LIABILITIES		-	5,330
TOTAL LIABILITIES		179,947	238,997
NET ASSETS		3,672,212	7,268,235
EQUITY			
Issued capital	14	65,663,764	65,637,936
Reserves	14	(789,046)	(372,604)
Accumulated losses		(61,202,506)	(57,997,097)
TOTAL EQUITY		3,672,212	7,268,235

The above Statement of Financial Position should be read in conjunction with the accompanying notes.

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HYDROCARBON DYNAMICS LIMITED
(ABN 75 117 387 354)

**CONSOLIDATED STATEMENT OF CHANGES IN EQUITY
FOR YEAR ENDED 31 DECEMBER 2021**

Consolidated	Issued Capital	Foreign Currency Translation Reserve	Share Based Payments Reserve	Accumulated Losses	Total
	\$	\$	\$	\$	\$
Balance at 1 January 2020	62,857,124	(762,354)	92,033	(56,020,832)	6,165,971
Loss for the year	-	-	-	(2,052,265)	(2,052,265)
Other comprehensive loss for the year	-	(54,994)	-	-	(54,994)
Total comprehensive loss for the year	-	(54,994)	-	(2,052,265)	(2,107,259)
Transactions with owners in their capacity as owners					
Contributions of equity net of transaction costs	2,725,312	-	-	-	2,725,312
Shares issued in lieu of cash	55,500	-	-	-	55,500
Expiry of options	-	-	(76,000)	76,000	-
Share based payments	-	-	428,711	-	428,711
	2,780,812	-	352,711	76,000	3,209,523
Balance at 31 December 2020	65,637,936	(817,348)	444,744	(57,997,097)	7,268,235
Balance at 1 January 2021	65,637,936	(817,348)	444,744	(57,997,097)	7,268,235
Loss for the year	-	-	-	(3,364,439)	(3,364,439)
Other comprehensive profit for the year	-	28,302	-	-	28,302
Total comprehensive profit/(loss) for the year	-	28,302	-	(3,364,439)	(3,336,137)
Transactions with owners in their capacity as owners					
Contributions of equity net of transaction costs	(1,922)	-	-	-	(1,922)
Shares issued in lieu of cash	27,750	-	(27,750)	-	-
Expiry of options	-	-	(685,905)	159,030	(526,875)
Share based payments	-	-	268,911	-	268,911
	25,828	-	(444,744)	159,030	(259,886)
Balance at 31 December 2021	65,663,764	(789,046)	-	(61,202,506)	3,672,212

The above Statement of Changes in Equity should be read in conjunction with the accompanying notes.

HYDROCARBON DYNAMICS LIMITED
(ABN 75 117 387 354)

CONSOLIDATED STATEMENT OF CASH FLOWS
FOR YEAR ENDED 31 DECEMBER 2021

	Note	Group	
		2021 \$	2020 \$
CASH FLOWS FROM OPERATING ACTIVITIES			
Receipts from customers		144,202	83,667
Payments to suppliers and employees		(1,815,352)	(2,048,414)
Research and development refund received		147,407	265,380
Interest received		3,063	9,394
Interest paid		(7,930)	(5,463)
NET CASH USED IN OPERATING ACTIVITIES	8(a)	(1,528,610)	(1,695,436)
CASH FLOWS FROM INVESTING ACTIVITIES			
Payment for exploration and evaluation assets		(79,242)	(27,421)
Receipt from sale of exploration and evaluation assets		676,890	-
Payment for intangible assets		(3,931)	(1,345)
NET CASH PROVIDED BY / (USED IN) INVESTING ACTIVITIES		593,717	(28,766)
CASH FLOWS FROM FINANCING ACTIVITIES			
Repayment of insurance funding loan		(124,749)	(153,058)
Proceeds from issue of shares		-	2,795,520
Share issue costs		(1,922)	(70,208)
NET CASH PROVIDED BY / (USED IN) FINANCING ACTIVITIES		(126,671)	2,572,254
Net increase / (decrease) in cash held		(1,061,564)	848,052
Cash at beginning of financial year		2,442,306	1,627,595
Effect of exchange rate movement		13,218	(33,341)
CASH AT THE END OF THE YEAR	8	1,393,960	2,442,306

The above Statement of Cash Flows should be read in conjunction with the accompanying notes.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

NOTE 1 STATEMENT OF SIGNIFICANT ACCOUNTING POLICIES

The Annual Report is a general purpose financial report that has been prepared in accordance with Australian Accounting Standards, and Interpretations, issued by the Australian Accounting Standards Board and the *Corporations Act 2001*.

This Annual Report covers the consolidated financial statements and notes of Hydrocarbon Dynamics Limited and its controlled entities ('Consolidated Group' or 'Group'). Hydrocarbon Dynamics Limited is a listed public company, incorporated and domiciled in Australia. The Group is a for-profit entity for the purpose of preparing the consolidated financial statements.

The Group's registered office is: Level 6, 412 Collins Street, Melbourne VIC 3000.

NOTE 2 BASIS OF PREPARATION

Compliance with accounting standards

The consolidated financial statements of the Group also comply with International Financial Reporting Standards (IFRS) as issued by the International Accounting Standard Board (IASB).

Historical cost convention

The consolidated financial statements have been prepared on an accruals basis and are based on historical costs modified, where applicable, by the measurement at fair value of selected financial assets and financial liabilities.

Comparatives

When required by Accounting Standards, comparative figures have been adjusted to conform to changes in presentation for the current financial year.

Going concern

The consolidated financial statements have been prepared on a going concern basis which contemplates that the Group will continue to meet its commitments and can therefore continue normal business activities and the realisation of assets and settlement of liabilities in the ordinary course of business.

As at 31 December 2021, the Group has \$1,393,960 (2020: \$2,442,306) in cash and cash equivalents and net assets of \$3,672,212 (2020: \$7,268,235). The Group incurred a loss from continuing operations, excluding impairment losses, of \$1,534,125 (2020: \$2,052,265) and a net cash outflow from operating activities of \$1,528,610 (2020: \$1,852,436).

The ability of the Group to continue to adopt the going concern assumption will depend upon a number of matters including the successful raising in the future of necessary funding through debt, equity or the commercialisation of the Group's HCD product. As disclosed in Note 20, the Group undertook a 1-for-3 non-renounceable entitlement offer at an issue price of \$0.011 per share which closed on 14 March 2022. The total amount raised was \$1,078,232 for a total of 98,021,075 new shares.

The Group continually monitors its cash flow requirements to ensure that it has sufficient funds to meet its contractual commitments and adjusts its spending with respect to discretionary corporate overhead accordingly. The Group's ability to enact its strategy to commercialise its HCD product is dependent upon the effectiveness of ongoing liquidity management activities.

In the absence of the above matters being successful, there exists a material uncertainty that may cast significant doubt on the Group's ability to continue as a going concern with the result that the Group may have to realise its assets and extinguish its liabilities other than in the ordinary course of business, and at amounts different from those stated in the consolidated financial statements. No adjustments for such circumstances have been made in the consolidated financial statements.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

NOTE 3 SIGNIFICANT ACCOUNTING POLICIES

The principal accounting policies adopted in the preparation of these consolidated financial statements are set out below. These policies have been consistently applied to all of the years presented unless otherwise stated.

(a) Principles of consolidation

Subsidiaries

Subsidiaries are all entities (including structured entities) over which the Group has control. The Group controls an entity when the Group is exposed to, or has the rights to, variable returns from its involvement with the entity and has the ability to affect those returns through its power to direct the activities of the entity. Subsidiaries are fully consolidated from the date on which control is transferred to the Group. They are de-consolidated from the date that control ceases.

The acquisition method of accounting is used to account for the acquisition of subsidiaries by the Group.

Intercompany transactions, balances and unrealised gains on transactions between Group companies are eliminated. Unrealised losses are also eliminated unless the transaction provides evidence of the impairment of the asset transferred.

Accounting policies of subsidiaries have been changed where necessary to ensure consistency with the policies adopted by the Group. The financial statements of subsidiaries are prepared for the same reporting period as the parent entity. Investments in subsidiaries are accounted for at cost in the separate financial statements of Hydrocarbon Dynamics Limited.

Changes in ownership interests

The Group treats transactions with non-controlling interests that do not result in a loss of control as transactions with equity owners of the Group. A change in ownership interest results in an adjustment between the carrying amounts of the controlling and non-controlling interests to reflect their relative interests in the subsidiary. Any difference between the amount of the adjustment to non-controlling interests and any consideration paid or received is recognised in a separate reserve within equity attributable to owners of the parent entity.

When the Group ceases to have control, joint control or significant influence, any retained interest in the entity is remeasured to its fair value with the change in carrying amount recognised in profit or loss. The fair value is the initial carrying amount for the purposes of subsequently accounting for the retained interest as an associate, jointly controlled entity or financial asset. In addition, any amounts previously recognised in other comprehensive income in respect of that entity are accounted for as if the Group had directly disposed of the related assets or liabilities. This means that any amounts previously recognised in other comprehensive income are reclassified to profit or loss.

If the ownership interest in a jointly-controlled entity or an associate is reduced but joint control or significant influence is retained, only a proportionate share of the amounts previously recognised in other comprehensive income are reclassified to profit or loss where appropriate.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

(b) Income tax

The income tax expense (revenue) for the year comprises current income tax expense (income) and deferred tax expense (income).

Current income tax expense charged to the profit or loss is the tax payable on taxable income calculated using applicable income tax rates enacted, or substantially enacted, as at reporting date. Current tax liabilities (assets) are therefore measured at the amounts expected to be paid to (recovered from) the relevant taxation authority.

Deferred income tax expense reflects movements in deferred tax asset and deferred tax liability balances during the year as well as unused tax losses.

Current and deferred income tax expense (income) is charged or credited directly to equity instead of the profit or loss when the tax relates to items that are credited or charged directly to equity.

Deferred tax assets and liabilities are ascertained based on temporary differences arising between the tax bases of assets and liabilities and their carrying amounts in the consolidated financial statements. Deferred tax assets also result where amounts have been fully expensed but future tax deductions are available. No deferred income tax will be recognised from the initial recognition of an asset or liability, excluding a business combination, where there is no effect on accounting or taxable profit or loss.

Deferred tax assets and liabilities are calculated at the tax rates that are expected to apply to the period when the asset is realised or the liability is settled, based on tax rates enacted or substantively enacted at reporting date. Their measurement also reflects the manner in which management expects to recover or settle the carrying amount of the related asset or liability.

Deferred tax assets relating to temporary differences and unused tax losses are recognised only to the extent that it is probable that future taxable profit will be available against which the benefits of the deferred tax asset can be utilised. Current tax assets and liabilities are offset where a legally enforceable right of offset exists and it is intended net settlement or simultaneous realisation and settlement of the respective asset and liability will occur. Deferred tax assets and liabilities are offset where a legally enforceable right of setoff exists, the deferred tax assets and liabilities related to income taxes levied by the same taxation authority on either the same taxable entity or different taxable entities, where it is intended that net settlement or simultaneous realisation and settlement of the respective asset and liabilities will occur in future periods in which significant amounts of deferred tax assets or liabilities are expected to be recovered or settled.

(c) Foreign currency translation

Functional and presentation currency

Items included in the financial statements of each of the Group's entities are measured using the currency of the primary economic environment in which the entity operates ('the functional currency'). The consolidated financial statements are presented in Australian dollars, which is the Group's functional and presentation currency.

Transactions and balances

Foreign currency transactions are translated into the functional currency using the exchange rates prevailing at the dates of the transactions. Foreign exchange gains and losses resulting from the settlement of such transactions and from the translation at year end exchange rates of monetary assets and liabilities denominated in foreign currencies are recognised in the Consolidated Statement of Profit or Loss and Other Comprehensive Income, except when they are deferred in equity as qualifying cash flow hedges and qualifying net investment hedges or are attributable to part of the net investment in a foreign operation.

Translation differences on assets and liabilities carried at fair value are reported as part of the fair value gain or loss. Translation differences on non-monetary assets and liabilities such as equities held at fair value through profit or loss are recognised in profit or loss as part of the fair value gain or loss.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

Foreign currency translation (continued)

Group companies

The results and financial position of all the Group entities that have a functional currency different from the presentation currency are translated into the presentation currency as follows:

- assets and liabilities for each Statement of Financial Position presented are translated at the closing rate at the date of that Statement of Financial Position;
- income and expenses for each Statement of Profit or Loss and Other Comprehensive Income are translated at average exchange rates (unless this is not a reasonable approximation of the cumulative effect of the rates prevailing on the transaction dates, in which case income and expenses are translated at the dates of the transactions); and
- all resulting exchange differences are recognised in other comprehensive income.

On consolidation, exchange differences arising from the translation of any net investment in foreign entities, and of borrowings and other financial instruments designated as hedges of such investments, are recognised in other comprehensive income and accumulated as a separate component of equity. When a foreign operation is sold or any borrowings forming part of the net investment are repaid, a proportionate share of such exchange differences that have been accumulated in equity are recognised in the Consolidated Statement of Profit or Loss and Other Comprehensive Income, as part of the gain or loss on sale where applicable.

Goodwill and fair value adjustments arising on the acquisition of a foreign entity are treated as assets and liabilities of the foreign entity and translated at the closing rate.

(d) Goods and services tax (GST)

Revenues, expenses and assets are recognised net of the amount of GST, except where the amount of GST incurred is not recoverable from the Australian Tax Office. In these circumstances the GST is recognised as part of the cost of acquisition of the asset or as part of an item of the expense.

Receivables and payables in the balance sheet are shown inclusive of GST.

Cash flows are presented in the Consolidated Statement of Cash Flows on a gross basis, except for the GST component of investing and financing activities, which are disclosed as operating cash flows.

(e) Revenue and other Income

Sale of goods

Revenue from the sale of goods is recognised when the performance obligation is satisfied. This is the point in time when the customer obtains control of the goods, which is generally at the time of delivery.

Revenue is recognised at amounts that reflect the consideration to which the entity is expected to be entitled in exchange for transferring goods to a customer.

Interest

Interest revenue is recognised as interest accrues using the effective interest method. This is a method of calculating the amortised cost of a financial asset and allocating the interest income over the relevant period using the effective interest rate, which is the rate that exactly discounts estimated future cash receipts through the expected life of the financial asset to the net carrying amount of the financial asset.

Other revenue

Other revenue is recognised when it is received or when the right to receive payment is established.

All revenue is stated net of the amount of goods and services tax (GST).

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

(f) Cash and cash equivalents

Cash and cash equivalents include cash on hand, deposits held at call with banks, other short-term highly liquid investments with original maturities of three months or less, and bank overdrafts. Bank overdrafts are shown within short-term borrowings in current liabilities on the Consolidated Statement of Financial Position.

(g) Financial instruments

Recognition and initial measurement

Financial instruments, incorporating financial assets and financial liabilities, are recognised when the entity becomes a party to the contractual provisions of the instrument. Trade date accounting is adopted for financial assets that are delivered within timeframes established by marketplace convention.

Financial instruments are initially measured at fair value plus transactions costs. Financial instruments are subsequently classified and measured as set out below.

Classification and subsequent measurement

Financial assets:

Financial assets are classified as current assets except for those with maturities greater than 12 months after the reporting period which are classified as non-current assets. Financial assets are subsequently classified and measured at amortised cost. All of the Group's financial assets are measured at amortised cost.

Financial assets at amortised cost

A financial asset shall be measured at amortised cost if both of the following conditions are met:

- (a) the financial asset is held within a business model whose objective is to hold financial assets in order to collect contractual cash flows and
- (b) the contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

These assets are subsequently measured at amortised cost using the effective interest rate method.

The Group establishes an allowance for impairment of trade receivables using the simplified approach permitted by AASB 9, which requires expected lifetime losses to be recognised from initial recognition of the receivables. The Group has not modified or renegotiated the contractual cash flows of any financial assets during the year.

Refer to Note 16 for further information on the Group's credit risk management policies and practices.

Financial liabilities:

Financial liabilities include trade payables, other creditors and accruals, loans and other amounts due, are subsequently measured at amortised cost using the effective interest rate method. Financial liabilities are classified as current liabilities unless the Group has an unconditional right to defer settlement of the liability for at least 12 months reporting date.

Derecognition

Financial assets are derecognised where the contractual rights to receipt of cash flows expires or the asset is transferred to another party whereby the entity no longer has any significant continuing involvement in the risks and benefits associated with the asset. Financial liabilities are derecognised where the related obligations are either discharged, cancelled or expire. The difference between the carrying value of the financial liability extinguished or transferred to another party and the fair value of consideration paid, including the transfer of non-cash assets or liabilities assumed, is recognised in profit or loss.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

(h) Trade and other receivables

Trade and other receivables are recognised initially at fair value and subsequently measured at amortised cost using the effective interest method, less provision for impairment. Trade receivables are generally due for settlement within 30 days. They are presented as current assets unless collection is not expected more than 12 months after reporting date.

The group applies the simplified approach under AASB 9 to measuring the allowance for credit losses for receivables from contracts with customers, contract assets and lease receivables. Under the AASB 9 simplified approach, the group determines the allowance for credit losses for receivables from contracts with customers, contract assets and lease receivables on the basis of the lifetime expected credit losses of the financial asset. Lifetime expected credit losses represent the expected credit losses that are expected to result from default events over the expected life of the financial asset.

For all other financial assets subject to impairment testing, when there has been a significant increase in credit risk since the initial recognition of the financial asset, the allowance for credit losses is recognised on the basis of the lifetime expected credit losses. When there has not been an increase in credit risk since initial recognition, the allowance for credit losses is recognised on the basis of 12-month expected credit losses. '12-month expected credit losses' is the portion of lifetime expected credit losses that represent the expected credit losses that result from default events on a financial instrument that are possible within the 12 months after the reporting date.

The group consider a range of information when assessing whether the credit risk has increased significantly since initial recognition. This includes such factors as the identification of significant changes in external market indicators of credit risk, significant adverse changes in the financial performance or financial position of the counterparty, significant changes in the value of collateral, and past due information.

The group assumes that the credit risk on a financial asset has not increased significantly since initial recognition when the financial asset is determined to have a low credit risk at the reporting date. The group considers a financial asset to have a low credit risk when the counterparty has an external 'investment grade' credit rating (if available) of BBB or higher, or otherwise is assessed by the group to have a strong financial position and no history of past due amounts from previous transactions with the group.

The group assumes that the credit risk on a financial instrument has increased significantly since initial recognition when contractual payments are more than 30 days past due.

The group determines expected credit losses using a provision matrix based on the group's historical credit loss experience, adjusted for factors that are specific to the financial asset as well as current and future expected economic conditions relevant to the financial asset. When material, the time value of money is incorporated into the measurement of expected credit losses. There has been no change in the estimation techniques or significant assumptions made during the reporting period.

The group has identified contractual payments more than 90 days past due as default events for the purpose of measuring expected credit losses. These default events have been selected based on the group's historical experience. Because contract assets are directly related to unbilled work in progress, contract assets have a similar credit risk profile to receivables from contracts with customers. Accordingly, the group applies the same approach to measuring expected credit losses of receivables from contracts with customers as it does to measuring impairment losses on contract assets.

The measurement of expected credit losses reflects the group's 'expected rate of loss', which is a product of the probability of default and the loss given default, and its 'exposure at default', which is typically the carrying amount of the relevant asset. Expected credit losses are measured as the difference between all contractual cash flows due and all contractual cash flows expected based on the group's exposure at default, discounted at the financial asset's original effective interest rate.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

Trade and other receivables (continued)

Financial assets are regarded as 'credit-impaired' when one or more events have occurred that have a detrimental impact on the estimated future cash flows of the financial asset. Indicators that a financial asset is 'credit-impaired' include observable data about the following:

- (a) significant financial difficulty of the issuer or the borrower;
- (b) breach of contract;
- (c) the lender, for economic or contractual reasons relating to the borrower's financial difficulty, has granted concessions to the borrower that the lender would not otherwise consider; or
- (d) it is becoming probable that the borrower will enter bankruptcy or other financial reorganisation.

The gross carrying amount of a financial asset is written off (i.e., reduced directly) when the counterparty is in severe financial difficulty and the group has no realistic expectation of recovery of the financial asset. Financial assets written off remain subject to enforcement action by the group. Recoveries, if any, are recognised in profit or loss.

(i) Inventories

The cost of inventory includes all costs of purchase, costs of conversion and other costs incurred in bringing the inventories to their present location and condition. The Group's cost generally includes the purchase price and the cost of transferring the inventory to the warehouse. Inventory is purchased from a third party. Inventories are measured at the lower of cost and net realisable value.

(j) Exploration and evaluation expenditure

Cost

Exploration and evaluation costs, including the costs of acquiring licences, are capitalised as exploration and evaluation assets on an area of interest basis. Costs incurred before the Group has obtained the legal rights to explore an area are expensed in the profit or loss.

The recoupment of costs carried forward in relation to areas of interest in the exploration and evaluation phase is dependent on successful development and commercial exploitation, or alternatively, sale of the respective areas of interest.

Recognition

Exploration and evaluation assets are only recognised if the rights to the area of interest are current and either:

- (i) the expenditures are expected to be recouped through successful development and exploitation of the area of interest or by its sale; or
- (ii) activities in the area of interest have not at the reporting date reached a stage which permits a reasonable assessment of the existence or otherwise of economically recoverable reserves, and active and significant operations in, or in relation to, the area of interest are continuing.

Once the technical feasibility and commercial viability of the area of interest are demonstrable, exploration and evaluation assets attributable to that area of interest are first tested for impairment and then reclassified from exploration and evaluation assets to property and development assets within property, plant and equipment.

The accumulated costs for the relevant area of interest is then amortised over the life of the area according to the rate of depletion of the economically recoverable reserves.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

Exploration and evaluation expenditure (continued)

The timing and amount of restoration costs that are expected to be incurred are estimated, and the net present value is included as part of the cost of the exploration and evaluation activity that gives rise to the need for restoration. A corresponding provision for restoration and rehabilitation is also recognised. Finance charges arising from the unwinding of the liability are recognised as an expense in the profit or loss. Site restoration costs include the dismantling and removal of mining equipment and facilities, waste removal, and rehabilitation of the site in accordance with clauses of the petroleum permits.

Impairment

The Group assesses the carrying value of the exploration and evaluation asset on an annual basis, in accordance with the indicators set out in AASB 6 *Exploration for and Evaluation of Mineral Resources*, being:

- (a) the period for which the entity has the right to explore in the specific area has expired during the period or will expire in the near future, and is not expected to be renewed;
- (b) substantive expenditure on further exploration for and evaluation of mineral resources in the specific area is neither budgeted nor planned;
- (c) exploration for and evaluation of mineral resources in the specific area have not led to the discovery of commercially viable quantities of mineral resources and the entity has decided to discontinue such activities in the specific area; and
- (d) sufficient data exists to indicate that, although a development in the specific area is likely to proceed, the carrying amount of the exploration and evaluation asset is unlikely to be recovered in full from successful development of by sale.

(k) Plant and equipment

Each class of plant and equipment is carried at cost less accumulated depreciation and impairment losses.

Plant and equipment

Plant and equipment are measured on the cost basis. The carrying amount of plant and equipment is reviewed annually by directors to ensure it is not in excess of the recoverable amount from these assets. The recoverable amount is assessed on the basis of the expected net cash flows that will be received from the asset's employment and subsequent disposal. The expected net cash flows have been discounted to their present values in determining recoverable amounts.

Depreciation

The depreciable amount of all fixed assets is depreciated on a straight-line basis over the asset's useful life to the Group commencing from the time the asset is held ready for use.

The depreciation rates used for each class of depreciable assets are:

Class of fixed asset	Depreciation rate
Plant and equipment	20 - 25%

The residual values and useful lives of assets are reviewed, and adjusted if appropriate, at each balance sheet date. The carrying amount of an asset is written down immediately to its recoverable amount if the assets' carrying amount is greater than its estimated recoverable amount.

Gains and losses on disposals are determined by comparing proceeds with the carrying amount. These gains and losses are included in the Consolidated Statement of Profit or Loss and Other Comprehensive Income.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

(l) Intangible assets

Goodwill

Goodwill represents the future economic benefits arising from other assets acquired in a business combination that are not individually identifiable or separately recognised. Goodwill is initially recognised at an amount equal to the excess of: (a) the aggregate of the consideration transferred, the amount of any non-controlling interest, and the acquisition date fair value of the acquirer's previously held equity interest (in the case of a step acquisition); over (b) the net fair value of the identifiable assets acquired and liabilities assumed. For accounting purposes, such measurement is treated as the cost of goodwill at that date.

Goodwill is not amortised but is tested annually for impairment, or more frequently if events or changes in circumstances indicate that it might be impaired. Goodwill is carried at cost less any accumulated impairment losses.

Intellectual property acquired in a business combination

The intellectual property was acquired in a business combination and was initially recognised at fair value (which, for accounting purposes, is treated as the cost of the intangible asset). The intellectual property is not being amortised as it is deemed to be an indefinite useful life asset. The intellectual property is tested for impairment annually.

(m) Impairment of non-financial assets

Goodwill and intangible assets that have an indefinite useful life are not subject to amortisation and are tested annually for impairment or more frequently if events or changes in circumstances indicate that they might be impaired. Other assets are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. An impairment loss is recognised for the amount by which the asset's carrying amount exceeds its recoverable amount. The recoverable amount is the higher of an asset's fair value less costs to sell and value in use. For the purposes of assessing impairment, assets are grouped at the lowest levels for which there are separately identifiable cash inflows which are largely independent of the cash inflows from other assets or Groups of assets (cash-generating units). Non-financial assets other than goodwill that suffered impairment are reviewed for possible reversal of impairment at each reporting date.

(n) Trade and other payables

These amounts represent liabilities for goods and services provided to the entity prior to the end of the financial year and which are unpaid. The amounts are unsecured and are usually paid within 30 days of recognition. Trade payables are included in current liabilities except for those with maturities greater than 12 months after the reporting period which are classified as non-current liabilities.

(o) Provisions

Short term obligations

Liabilities for salary and wages, including non-monetary benefits, annual leave and accumulating sick leave expected to be settled within 12 months after the end of the period in which the employees render the related service are recognised in respect of employees' services up to the end of the reporting period and are measured at the amounts expected to be paid when the liabilities are settled. The liability for annual leave and accumulating sick leave is recognised in the provision for employee benefits.

Long term obligations

Liabilities for long service leave and annual leave which is not expected to be settled within 12 months after the end of the period in which the employees render the related service is recognised in the provision for employee benefits and measured as the present value of estimated future cash outflows to be made for those benefits. The obligations are presented as current liabilities if there is not an unconditional right to defer settlement for at least 12 months after the reporting date, regardless of when the actual settlement is expected to occur.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

Provisions (continued)

Defined contribution superannuation plan

The consolidated entity makes superannuation contributions (currently 10% of the employee's average ordinary salary) to the employee's defined contribution superannuation plan of choice in respect of employee services rendered during the year. These superannuation contributions are recognised as an expense in the same period when the related employee services are received. The Group's obligation with respect to employee's defined contributions entitlements is limited to its obligation for any unpaid superannuation guarantee contributions at the end of the reporting period. All obligations for unpaid superannuation guarantee contributions are measured at the (undiscounted) amounts expected to be paid when the obligation is settled and are presented as current liabilities in the Consolidated Statement of Financial Position.

Equity-settled compensation

The Group operates equity-settled share-based payment employee share and option schemes. The fair value of the equity to which employees become entitled is measured at grant date and recognised as an expense over the vesting period, with a corresponding increase to an equity account. The fair value of shares is ascertained as the market bid price. The fair value of options is ascertained using a Black-Scholes pricing model which incorporates all market vesting conditions. The number of shares and options expected to vest is reviewed and adjusted at each reporting date such that the amount recognised for services received as consideration for the equity instruments granted shall be based on the number of equity instruments that eventually vest.

The share-based payments reserve is used to record the expense associated with options and performance rights granted to employees under equity-settled share-based payment arrangements. It is also used to record fair value of options granted for other goods and services as well as acquisition of other assets.

On expiry any remaining balance in the reserve is transferred to accumulated losses.

(p) Contributed equity

Ordinary shares are classified as equity. Incremental costs directly attributable to the issue of new shares or options are shown in equity as a deduction, net of tax, from the proceeds. Incremental costs directly attributable to the issue of new shares or options for the acquisition of a business are not included in the cost of acquisition as part of the purchase consideration.

(q) Leases

At the commencement date of a lease (other than leases of 12-months or less and leases of low value assets), the group recognises a lease asset representing its right to use the underlying asset and a lease liability representing its obligation to make lease payments.

Lease assets

Lease assets are initially recognised at cost, comprising the amount of the initial measurement of the lease liability, any lease payments made at or before the commencement date of the lease, less any lease incentives received, any initial direct costs incurred by the group, and an estimate of costs to be incurred by the group in dismantling and removing the underlying asset, restoring the site on which it is located or restoring the underlying asset to the condition required by the terms and conditions of the lease, unless those costs are incurred to produce inventories.

Subsequent to initial recognition, lease assets are measured at cost (adjusted for any remeasurement of the associated lease liability), less accumulated depreciation and any accumulated impairment loss.

Lease assets are depreciated over the shorter of the lease term and the estimated useful life of the underlying asset, consistent with the estimated consumption of the economic benefits embodied in the underlying asset.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

Leases (continued)

Lease liabilities

Lease liabilities are initially recognised at the present value of the future lease payments (i.e., the lease payments that are unpaid at the commencement date of the lease). These lease payments are discounted using the interest rate implicit in the lease, if that rate can be readily determined, or otherwise using the group's incremental borrowing rate. Subsequent to initial recognition, lease liabilities are measured at the present value of the remaining lease payments (i.e., the lease payments that are unpaid at the reporting date). Interest expense on lease liabilities is recognised in profit or loss (presented as a component of finance costs). Lease liabilities are remeasured to reflect changes to lease terms, changes to lease payments and any lease modifications not accounted for as separate leases.

Variable lease payments not included in the measurement of lease liabilities are recognised as an expense when incurred.

Leases of 12-months or less and leases of low value assets

Lease payments made in relation to leases of 12-months or less and leases of low value assets (for which a lease asset and a lease liability has not been recognised) are recognised as an expense on a straight-line basis over the lease term.

Leases of exploration and mining tenements are exempt and accounted for under AASB 6 *Exploration for and Evaluation of Mineral Resources*. The Group is not party to any leases that would need to be accounted for in accordance with AASB 16 *Leases*.

(r) EPS

Basic earnings per share

Basic earnings per share is determined by dividing the profit attributable to equity holders of the Group, excluding any costs of servicing equity other than ordinary shares, by the weighted average number of ordinary shares outstanding during the year, adjusted for bonus elements in ordinary shares issued during the year.

Diluted earnings per share

Diluted earnings per share adjusts the amounts used in determination of basic earnings per share to take in to account the after income tax effect of interest and other financing costs associated with dilutive potential ordinary shares and the weighted average number of shares assumed to have been issued for no consideration in relation to dilutive potential ordinary shares.

(s) Segment reporting

Operating segments are reported in a manner consistent with the internal reporting provided to the chief operating decision maker. The chief operating decision maker who is responsible for allocating resources and assessing performance of the operating segments has been identified as the Board of Directors.

Segment revenues and expenses are those directly attributable to the segments. Segment assets include all assets used by a segment and consist principally of cash, receivables, inventory, intangibles and plant and equipment, net of accumulated depreciation and amortisation. While most such assets can be directly attributed to individual segments, the carrying amount of certain assets used jointly by two or more segments is allocated to the segments on a reasonable basis. Segment liabilities consist principally of payables, employee benefits and accrued expenses. Segment assets and liabilities do not include deferred income taxes.

(t) Changes in accounting policies

Mandatory accounting pronouncements effective from 1 January 2021 have been adopted by the Group and have had no material impact on the financial results or position.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

(u) New accounting standards and interpretations for application in future periods

At the date of authorisation of these consolidated financial statements, several new, but not yet effective, Standards and amendments to existing Standards, and Interpretations have been published by the IASB. None of these Standards or amendments to existing Standards have been adopted early by the Group. Management anticipates that all relevant pronouncements will be adopted for the first period beginning on or after the effective date of the pronouncement. New Standards, amendments and Interpretations not adopted in the current year have not been disclosed as they are not expected to have a material impact on the Group's financial statements.

NOTE 4 CRITICAL ACCOUNTING ESTIMATES AND ASSUMPTIONS

The preparation of the Annual Report requires the use of certain critical accounting estimates. It also requires management to exercise its judgement when applying the Group's accounting policies. These estimates and judgements are continually evaluated and are based on historical experience and other factors, including expectations of future events that may have a financial impact on the Group and that are believed to be reasonable under the circumstances.

The resulting accounting estimates will, by definition, seldom equal the related actual results. The estimates and assumptions that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities in future years.

The critical estimates and judgements applied in the preparation of the Annual Report are as follows:

a) Recoverability of goodwill and other intangible assets

The Group acquired 100% of the issued shares in Hydrocarbon Dynamics ("HCD") in April 2017, upon which the goodwill, intellectual property and patents were acquired. The intangible assets are indefinite useful life assets and are not amortised. The Board views the Group as one cash generating unit ("CGUs"), being HCD. Goodwill of \$1,125,997 (2020: \$3,282,299) and identifiable intangible assets of \$663,218 (2020: \$686,930) have been allocated to the HCD CGU.

The goodwill and identifiable intangible assets are required to be assessed for impairment annually (or earlier if impairment indicators exist) by comparing the carrying value of the CGU to which they have been allocated to its recoverable amount. The Board has determined the recoverable amount of the HCD CGU by assessing the fair value less costs of disposal (FVLCO) of the underlying CGU. This market approach is based on the market capitalisation (number of shares multiplied by the quoted market price per share) of the Group on the Australian Securities Exchange (ASX) at balance date as a proxy for enterprise value. The recoverable amount uses both Level 1 and Level 3 inputs.

Impairment assessment at 30 June 2021:

The Group assessed the carrying value of its non-financial assets for impairment at 30 June 2021. The recoverable amount of the HCD CGU was less than the carrying value of the non-financial assets allocated to the CGU, resulting in an impairment charge of \$2,156,902 (2020: \$nil) being recognised. The impairment charge is recognised in the Chemical segment in Note 15.

Impairment assessment at 31 December 2021:

The Group performed a further assessment of the carrying value of its non-financial assets for impairment at 31 December 2021.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

a) Recoverability of goodwill and other intangible assets (continued)

The Group's market capitalisation at balance date of \$5,723,771 (being the 440,290,106 shares outstanding at balance date multiplied by the share price of \$0.013/share at 31 December 2021) has been allocated to the HCD CGU, adjusted for unallocated financial assets. At 31 December 2021 the recoverable amount of the HCD CGU was above the carrying value of the non-financial assets of the CGU, therefore requiring no further impairment.

If the share price used in the fair value assessment had been 20% lower at 31 December 2021, the Group would have had to recognise an impairment against the carrying value of goodwill of \$593,195.

NOTE 5 REVENUE AND EXPENDITURE

	2021	2020
	\$	\$
Loss before income tax includes the following specific expenses:		
(a) Revenue from contracts with customers		
Recognised at a point in time (sale of HCD product direct to customers)	64,192	181,595
	64,192	181,595
(b) Other income		
R&D rebate	147,407	265,380
Interest income	2,825	6,510
	150,232	271,890
(c) Director and employee related costs		
Salaries and wages expense	(652,567)	(727,541)
Defined contribution superannuation expense	(3,273)	(4,750)
	(655,840)	(732,291)
(d) Depreciation and amortisation costs		
Depreciation expense – PP&E	(782)	(1,057)
Amortisation expense – patents	(27,643)	-
	(28,425)	(1,057)
(e) Auditor's remuneration		
During the year the following fees were paid or payable for services provided by Pitcher Partners, the auditor of the Group:		
- Auditing or reviewing the consolidated financial statements	(56,000)	(53,000)
	(56,000)	(53,000)

There were no non-audit services during the financial year (2020: Nil).

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NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

NOTE 6 INCOME TAX EXPENSE

	2021 \$	2020 \$
(a) Recognised in the Consolidated Statement of Profit or Loss and Other Comprehensive Income		
Current tax expense	-	-
Deferred tax expense	-	-
Income tax expense	-	-
(b) Numerical reconciliation of income tax expense to prima facie tax on accounting profit		
Loss before income tax	3,364,439	2,052,265
Tax benefit at the Australian tax rate of 26% (2020: 27.5%)	874,754	564,373
Tax effect of amounts which are not deductible/(taxable) in calculating taxable income:		
Share options reversal / (expense)	67,071	(133,158)
Impairment of goodwill	(560,795)	-
Other non-deductible items	(36,339)	(871)
Capital and tax losses not recognised in deferred tax assets	(344,691)	(430,344)
	-	-
The deductible temporary differences and tax losses do not expire under current tax legislation. Deferred tax assets have not been recognised in respect of these items because it is not probable that future taxable profit will be available against which the Group can utilise the benefits from the deferred tax assets.		
(c) Reconciliation of deferred tax assets/(liabilities)		
Deferred tax asset	-	-
balance of deferred tax asset comprises:		
Deferred tax assets		
Tax losses	10,252,515	9,907,824
S40-880 deductions	17,362	30,318
Provisions	33,338	25,477
	10,303,215	9,963,619
Deferred tax liabilities		
Exploration and evaluation expenditure	-	67,339
	-	67,339
Net deferred tax asset	10,303,215	9,896,280
Deferred tax asset not recognised	10,303,215	9,896,280
Deferred tax asset recognised in accounts	-	-

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

NOTE 6 INCOME TAX EXPENSE (CONTINUED)

	2021	2020
	\$	\$
Movements in deferred tax asset		
Opening balance	-	-
Deferred tax (credited) to profit or loss	-	-
Closing balance	-	-
(d) Franking tax credits		
Franking credits available for subsequent financial years based on a tax rate of 26% (2020: 27.5%)	-	-

The above amounts represent the balance of the franking account as at the end of the financial year, adjusted for:

- (i) franking credits that will arise from the payment of the amount of the provision for income tax;
- (ii) franking debits that will arise from the payment of dividends recognised as a liability at the reporting date; and
- (iii) franking credits that will arise from the receipt of dividends recognised as receivable at the reporting date.

NOTE 7 DISCONTINUED OPERATIONS AND ASSETS HELD FOR SALE

(a) Description

The Group sold its interests in the Utah oil sands project for cash consideration of US\$500,000 (AU\$676,890) and an ongoing 2% revenue-based royalty in September 2021. The purchaser has also committed to test the Group's technology in three wells in the project area within six months of the completion of the sale.

The Group also had an interest in a project located in Kentucky, USA which expired in January 2021. The disposal of these assets is the discontinuance of a major line of business, being the exploration and exploitation of tenement interests.

(b) Financial performance and cash flow information

The financial performance and cash flow information for the year ended 31 December 2021 is:

Income		
Profit on sale of exploration and evaluation asset	337,729	-
Expenses		
Professional consultant and contractor fees	(11,141)	(7,226)
Profit / (loss) from discontinued operations, net of income tax	326,588	(7,226)
Cash flows:		
Net cash outflow from operating activities	(5,267)	(7,226)
Net cash inflow from investing activities	597,648	(27,422)
Net cash inflow / (outflow)	592,381	(34,648)

c) Assets and liabilities classified as held for sale

The following assets and liabilities were reclassified as held for sale in relation to the discontinued operation:

Exploration and evaluation expenditure	-	-
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NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

NOTE 8 CASH AND CASH EQUIVALENTS

	2021	2020
	\$	\$
Cash at bank	1,093,065	571,003
Cash on deposit	300,895	1,871,303
	<u>1,393,960</u>	<u>2,442,306</u>

The effective interest rate on short-term bank deposits was 0.1% (2020: 0.3%).

(a) Reconciliation of cash flow from operations

Loss for the year	(3,364,439)	(2,052,265)
Depreciation expense	782	1,057
Share-based payments expense / (reversal)	(257,964)	484,211
Impairment expense	2,156,902	-
Bad and doubtful debts	43,637	4,872
Amortisation expense	27,643	-
Gain on sale of exploration and evaluation asset	(337,729)	-
Change in assets and liabilities		
(Increase)/decrease in trade and other receivables	80,248	(95,044)
(Increase)/decrease in inventories	12,617	(141,895)
(Increase)/decrease in other assets	43,994	(64,964)
Increase/(decrease) in trade and other payables	73,592	156,879
Increase/(decrease) in provisions	(7,893)	11,713
Net cash used in operating activities	<u>(1,528,610)</u>	<u>(1,695,436)</u>

(b) Non-cash financing and investing activities

The Group issued \$27,750 (2020: \$55,500) of shares to consultants and directors during the year in lieu of cash. No cash was received for the issuance of these shares.

The year ended 31 December 2021 includes \$114,345 (2020: \$157,000) of insurance premium funding for which no cash was received by the Group.

(c) Credit standby arrangements

There are no credit or standby arrangements with financiers as at 31 December 2021 (2020: Nil).

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

NOTE 9 TRADE AND OTHER RECEIVABLES

	2021	2020
	\$	\$
Trade receivables	19,294	144,132
GST receivable	19,692	12,154
Deposits	-	7,401
Other receivables	1,080	264
	40,066	163,951

NOTE 10 INVENTORIES

Stock on hand (finished goods)	543,864	556,481
	543,864	556,481

NOTE 11 EXPLORATION AND EVALUATION EXPENDITURE

Exploration and evaluation expenditure	-	244,868
	-	244,868

The carrying value of each working interest is as follows:

Utah	-	244,868
	-	244,868

Movements in exploration and evaluation:

Balance at the beginning of the year	244,868	239,048
Exploration and evaluation expenditure during the year	79,242	27,421
Foreign currency adjustment	15,051	(21,601)
Sale of asset	(339,161)	-
Balance at the end of the year	-	244,868

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NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

NOTE 12 INTANGIBLE ASSETS

	2021	2020
	\$	\$
Goodwill	1,125,997	3,282,899
Intellectual property	663,218	663,218
Patents	-	23,712
	1,789,215	3,969,829

2021:

Movements in intangible assets:	Goodwill	Intellectual Property	Patents	Total
Balance at the beginning of the year	3,282,899	663,218	23,712	3,969,829
Additions	-	-	3,931	3,931
Amortisation expense	-	-	(27,643)	(27,643)
Impairment expense	(2,156,902)	-	-	(2,156,902)
Balance at the end of the year	1,125,997	663,218	-	1,789,215

2020:

Movements in intangible assets:	Goodwill	Intellectual Property	Patents	Total
Balance at the beginning of the year	3,282,899	663,218	22,367	3,968,484
Additions	-	-	1,345	1,345
Amortisation expense	-	-	-	-
Impairment expense	-	-	-	-
Balance at the end of the year	3,282,899	663,218	23,712	3,969,829

The goodwill, intellectual property and patents were acquired as part of a business combination on 6 April 2017.

NOTE 13 TRADE AND OTHER PAYABLES

Trade creditors	63,881	117,186
Accrued expenses	70,811	58,265
	134,692	175,451

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NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

NOTE 14 EQUITY

Issued capital

Issued capital	69,480,713	69,452,963
Capital raising costs	(3,816,949)	(3,815,027)
	65,663,764	65,637,936

Ordinary shares are classified as equity.

Incremental costs directly attributable to the issue of new shares are shown in equity as a deduction, net of tax, from the proceeds.

Ordinary shares entitle the holder to participate in dividends and the proceeds on winding up of the Group in proportion to the number of and amounts paid on the shares held. Every holder of ordinary shares present at a meeting in person or by proxy, is entitled to one vote, and upon a poll, each share is entitled to one vote.

	2021		2020	
	No.	\$	No.	\$
Movement in number of shares:				
Balance at the beginning of the year	439,422,918	69,452,963	282,077,778	66,601,943
<i>Movements during the year:</i>				
Entitlement offer ⁽ⁱ⁾	-	-	56,415,808	846,199
Private placement ⁽ⁱⁱ⁾	-	-	6,570,000	98,550
Entitlement offer ⁽ⁱⁱⁱ⁾	-	-	69,379,171	1,387,571
Private placement ^(iv)	-	-	23,160,000	463,200
Consulting services ^(v)	867,188	27,750	1,820,161	55,500
	867,188	27,750	157,345,140	2,851,020
Balance at the end of the year	440,290,106	69,480,713	439,422,918	69,452,963

(i) Shares issued under an entitlement offer on 4 May 2020 at an issue price of 1.5 cents per share.

(ii) Shares issued under a placement on 7 May 2020 at an issue price of 1.5 cents per share.

(iii) Shares issued under an entitlement offer on 23 November 2020 at an issue price of 2 cents per share.

(iv) Shares issued under a placement on 27 November 2020 at an issue price of 2 cents per share.

(v) Shares issued for services provided on 7th July 2020, 7th October 2020, 13th October 2020 and 8th January 2021. The number of shares issued is determined based on the Volume Weighted Average Price over the last 20 trading days of the month as it relates to each monthly payment.

Reserves

	2021	2020
	\$	\$
Foreign currency translation reserve	(789,046)	(817,348)
Share based payments reserve	-	444,744
	(789,046)	(372,604)

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NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

NOTE 14 EQUITY (CONTINUED)

Movement in foreign currency translation reserve:

Balance at the beginning of the year	(817,348)	(762,354)
Foreign currency adjustment	28,302	(54,994)
Balance at the end of the year	(789,046)	(817,348)

Movement in share based payments reserve:

Balance at the beginning of the year	444,744	92,033
Share based payments expense	268,911	428,711
Expiry of non-market based rights where vesting conditions were not satisfied	(526,875)	-
Expiry of market-based rights, transferred to accumulated losses on expiry	(159,030)	(76,000)
Shares issued in lieu of cash	(27,750)	-
Balance at the end of the year	-	444,744

Foreign currency translation reserve

The currency translation reserve records exchange differences arising on translation of foreign controlled entities.

Share based payments reserve

The share-based payments reserve is used to record the expense associated with options and performance rights granted to employees under equity-settled share-based payment arrangements. It is also used to record fair value of options granted for other goods and services as well as acquisition of other assets.

Share based payments

The share based payments expense included in the consolidated financial statements with respect to performance rights issued during the year and already issued in prior years is as follows:

	2021	2020
	\$	\$
<i>Consolidated Statement of Profit or Loss and Other Comprehensive Income</i>		
Share-based payments expensed during the period	(268,911)	(484,211)
Expiry of non-market based rights where vesting conditions were not satisfied ^(a)	526,875	-
Share-based payments reversal / (expense)	257,964	(484,211)
<i>Comprised of:</i>		
Performance rights	257,964	(400,961)
Shares in lieu of cash ^(b)	-	(83,250)
	257,964	(484,211)

(a) The performance incentive rights issued 11-Dec-19 and 08-Jan-20 expired 01-Sep-21 and both the market based and non-market based conditions were not met. The share-based payment costs in relation to the non-market based conditions reversed out of the share based payment expense against the share-based payment reserve.

(b) Shares were issued on 7 July 2020, 7 October 2020, 13 October 2020 and 8 January 2021 to consultants and directors in lieu of cash. The value is determined with reference to the value of invoices from creditors, with the number of shares issued determined based on the Volume Weighted Average Price over the last 20 trading days of the month as it relates to each monthly payment. \$nil (2020: \$27,750) remained outstanding at 2021 year-end and is included in the share-based payment reserve at balance date.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

NOTE 14 EQUITY (CONTINUED)

Performance Rights

The terms and conditions of each grant of performance rights during the year affecting remuneration in the current or a future period are shown in the table below.

Description	Grant date	No. of rights	Expiry date	Vesting date	Exercise price	Fair value	Performance condition
Incentive rights (a)	11-Dec-19	5,250,000	1 Sept 21	1-Sep-21	\$nil	\$0.02	Share price exceeding 15 cents for any consecutive 3 months prior to 1 Sept 2021.
Incentive rights (b)	11-Dec-19	5,250,000	1-Sept-21	1-Sep-21	\$nil	\$0.08	Sales revenue from the sale of Multi-Flow exceeding US\$900,000 over any 3 consecutive months prior to 1 Sept 2021
Incentive rights (c)	8-Jan-20	1,775,000	1-Sept-21	1-Sep-21	\$nil	\$0.03	Share price exceeding 15 cents for any consecutive 3 months prior to 1 Sept 2021.
Incentive rights (d)	8-Jan-20	1,775,000	1-Sept-21	1-Sep-21	\$nil	\$0.08	Sales revenue from the sale of Multi-Flow exceeding US\$900,000 over any 3 consecutive months prior to 1 Sept 2021

The movements in the current year of the number of performance rights granted are as follows:

Description	Grant date	Vesting date	Number at beginning of year	Granted during the year	Number of rights vested	Number of rights lapsed	Number at end of year
Tranche (a)	11-Dec-19	1-Sep-21	5,250,000	-	-	(5,250,000)	-
Tranche (b)	11-Dec-19	1-Sep-21	5,250,000	-	-	(5,250,000)	-
Tranche (c)	8-Jan-20	1-Sep-21	1,775,000	-	-	(1,775,000)	-
Tranche (d)	8-Jan-20	1-Sep-21	1,775,000	-	-	(1,775,000)	-

The model inputs for performance rights outstanding at year end included:

Description	Grant date	Vesting date	Exercise price	Share price at grant date	Expected volatility	Expected dividend yield	Risk free interest rate
Tranche (a) – market based	11-Dec-19	1-Sep-21	\$nil	\$0.08	72.5%	0%	0.82%
Tranche (b) – non-market based	11-Dec-19	1-Sep-21	\$nil	\$0.08	N/A		
Tranche (c) – market based	8-Jan-20	1-Sep-21	\$nil	\$0.08	87.0%	0%	0.78%
Tranche (d) – non-market based	8-Jan-20	1-Sep-21	\$nil	\$0.08	N/A		

The tranches with non-market conditions are valued using the share price at the date of issue, being \$0.08/share. The tranches with market conditions are valued using an option pricing model, as discussed in Note 1(o).

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

NOTE 14 EQUITY (CONTINUED)

Options

There is no formal employee share option plan. The number of options issued, the strike price of options issued and all other relevant terms have been set having regard to the persons position in the Group and level of experience. Such options vest according to the terms that are agreed at the time of grant between HCD and the employee. However, options normally vest either immediately upon grant or progressively within 12 months. Upon termination by either HCD or by the employee, all vested options remain the property of the employee, with no change to the life of the option. Upon termination by either HCD or the employee, all unvested options lapse.

The Group has no unexpired options at balance date (2020: nil).

Unlisted shares under option

The Group has the following unissued shares under option outstanding at the reporting date :

Description	Issue date	# of options	Expiry date	Issue price	Exercise price	Vested and Exerciseable
Share options for purchase of ordinary shares	23rd & 27th November 2020	46,269,645	31-Oct-22	\$nil	\$0.03	100%

The unissued shares under option do not carry voting rights.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

NOTE 15 SEGMENT INFORMATION

Operating segments

The Group comprises the following two operating segments defined by divisions:

- Exploration division: comprising the exploration, development and production of oil and gas projects in the US; and
- Chemical division: comprising clean oil technology and business (HCD) worldwide.

The Exploration division was disposed of during the year. Refer to Note 7 for further information.

Unallocated amounts include administrative operations undertaken in Australia to support the exploration, development and production of oil and gas projects worldwide and clean oil technology which includes the recharging of such costs via management fees.

31 December 2021	Chemical	Exploration	Total
Income	\$**	\$**	\$**
Research and development rebate	147,407	-	147,407
Revenue from contracts with customers	64,192	-	64,192
Interest	7	-	7
Expenditure			
Director and employee related expenses	(521,552)	-	(521,552)
Other expenses*	(2,940,812)	-	(2,940,812)
Segment result	(3,250,758)	-	(3,250,758)
Profit attributable to discontinued operations	-	326,588	326,588
Profit/(loss) for the year	(3,250,758)	326,588	(2,924,170)
Assets as at 31 December 2021	2,913,636	-	2,913,636
Liabilities as at 31 December 2021	(119,809)	-	(119,809)

* Impairment expense of \$2,156,902 (2020: \$nil) has been included in the Chemical other expenses.

31 December 2020

Income

Research and development rebate	265,380	-	265,380
Revenue from contracts with customers	181,595	-	181,595
Interest	95	-	95

Expenditure

Director and employee related expenses	(645,107)	-	(645,107)
Other expenses	(933,543)	-	(933,543)

Segment result

Loss attributable to discontinued operations	-	(7,226)	(7,226)
Loss for the year	(1,131,580)	(7,226)	(1,138,806)

Assets as at 31 December 2020	4,983,400	244,868	5,228,268
Liabilities as at 31 December 2020	(108,671)	(24,760)	(133,431)

** the prior period comparative has been restated for a change in the presentation of the discontinued operation in the current period.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

NOTE 15 SEGMENT INFORMATION (CONTINUED)

Reconciliation of reportable segment revenue, profit or loss, assets and liabilities and other material items:

	31 December	31 December 2020
	2021	2020
	\$	\$**
Revenue:		
Total revenue for reportable segments	64,192	181,595
Elimination of inter-segment revenue	-	-
Consolidated revenue	64,192	181,595
Other income:		
Total other income for reportable segments	147,414	265,475
Unallocated amounts: interest income	2,818	6,415
Consolidated other income	150,232	271,890
Director and employee related expenses:		
Total director and employee related expenses for reportable segments	(521,552)	(645,107)
Unallocated amounts: corporate costs	(134,288)	(87,184)
Consolidated director and employee related expenses	(655,840)	(732,291)
Other expenses:		
Total other expenses for reportable segments	(2,940,812)	(933,543)
Unallocated amounts: corporate costs	(308,799)	(832,690)
Consolidated other expenses	(3,249,611)	(1,766,233)
Loss for the period:		
Total loss for reportable segments	(3,250,758)	(1,131,580)
Total profit/(loss) attributable to discontinued operations	326,588	(7,226)
Unallocated amounts: revenue	-	-
Unallocated amounts: interest income	2,818	6,415
Unallocated amounts: corporate costs	(443,087)	(919,874)
Consolidated loss for the period	(3,364,439)	(2,052,265)
Assets:		
Total assets for reportable segments	2,913,636	5,228,268
Unallocated amounts: corporate assets	938,523	2,278,964
Consolidated assets	3,852,159	7,507,232
Liabilities:		
Total liabilities for reportable segments	(119,809)	(133,431)
Unallocated amounts: corporate liabilities	(60,138)	(105,566)
Consolidated liabilities	(179,947)	(238,997)

** the prior period comparative has been restated for a change in the presentation of the discontinued operation in the current period.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

NOTE 16 FINANCIAL RISK MANAGEMENT

Overview

The Group's principal financial instruments comprise cash and cash equivalents, trade and other receivables, loans to and from subsidiaries, and trade and other payables. The main risks arising from the Group's financial assets and liabilities are interest rate risk, price risk, foreign currency risk, credit risk and liquidity risk. This note presents information about the Group's exposure to each of the above risks, its objectives, policies and processes for measuring and managing risk.

The Group regularly analyses financial risk exposure and evaluate treasury management strategies in the context of the most recent economic conditions and forecasts. Key risks are monitored and reviewed as circumstances change (e.g. acquisition of new entity or project) and policies are created or revised as required. The overall objective of the Group's financial risk management policy is to support the Group in meeting its financial targets, whilst minimizing potential adverse effects on financial performance.

Given the nature and size of the business and uncertainty as to the timing and amount of cash inflows and outflows, the Group does not enter into derivative transactions to mitigate the financial risks. In addition, the Group's policy is that no trading in financial instruments shall be undertaken for the purpose of making speculative gains. As the Group's operations change, the Directors will review this policy.

The Board of Directors has overall responsibility for the establishment and oversight of the risk management framework. The Board reviews and agrees policies for managing the Group's financial risks as summarised below.

The Group holds the following financial instruments which are carried at amortised cost unless otherwise stated:

	2021	2020
	\$	\$
Financial assets		
Cash and cash equivalents	1,393,960	2,442,306
Trade and other receivables	40,066	163,951
	1,434,026	2,606,257
Financial liabilities		
Trade and other payables	134,692	175,451
Borrowings	-	10,404
	134,692	185,855

Interest rate risk

Exposure to interest rate risk arises on cash and cash equivalents recognised at reporting date whereby a future change in interest rates will affect future cash flows or the fair value of fixed rate financial instruments.

A forward business cash requirement estimate is made, identifying cash requirements for the following period (generally up to one year) and interest rate term deposit information is obtained from a variety of banks over a variety of periods (usually one month up to six month term deposits) accordingly. The funds to invest are then scheduled in an optimised fashion to maximise interest returns.

Interest rate sensitivity

A sensitivity of 1% interest rate has been selected as this is considered reasonable given the current market conditions. A 1% movement in interest rates at the reporting date would have increased/(decreased) equity and profit or loss by the amounts shown below. This analysis assumes that all other variables, in particular foreign currency rates, remain constant. The analysis is performed on the same basis for 2020.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

NOTE 16 FINANCIAL RISK MANAGEMENT (CONTINUED)

	Profit or Loss		Equity	
	1% increase	1% decrease	1% increase	1% decrease
2021	\$	\$	\$	\$
Cash and cash equivalents	13,940	(13,940)	13,940	(13,940)
2020				
Cash and cash equivalents	24,423	(24,423)	24,423	(24,423)

Liquidity risk

Liquidity risk is the risk that the Group will not be able to meet its financial obligations as they fall due. The Board's approach to managing liquidity is to ensure, as far as possible, that the Group will always have sufficient resources to meet its obligations when due.

Ultimate responsibility for liquidity risk management rests with the Board of Directors. The Group manages liquidity risk by monitoring forecast cash flows and ensuring that adequate funds from capital raising are maintained for future expenditure on working interest assets. This involves the monitoring of actual cash flows and matching the maturity profiles of financial assets and liabilities. This is based on the undiscounted cash flows of the financial liabilities based on the earliest date on which they are required to be paid.

The following table details the remaining contractual maturity for non-derivative financial liabilities.

	<1 year	Total Contractual Cash Flows	Carrying Amount
	\$	\$	\$
2021			
Trade and other payables	134,692	134,692	134,692
Borrowings	-	-	-
	134,692	134,692	134,692
2020			
Trade and other payables	175,451	175,451	175,451
Borrowings	10,404	10,404	10,404
	185,855	185,855	185,855

Foreign exchange risk

The Group is exposed to fluctuations in foreign currencies arising from the sale and purchases of goods and services in currencies other than the Group's presentation currency. The Group is also exposed to transactional currency movements. Such exposures arise from transactions which are denominated in currencies other than the functional currency of the Group. The Group's exposure to foreign currency risk primarily arises from the Group's operations overseas, namely in the United States.

The Group is also exposed to fluctuations in foreign currencies arising from the loans advanced by the Australian-based parent entity (denominated in AUD) to its United States based subsidiaries. Foreign currency gains/losses are recorded by the subsidiaries and are eliminated on consolidation via the foreign currency translation reserve.

The Group currently does not engage in any hedging or derivative transactions to manage foreign currency risk. The Group's policy is to generally convert its local currency to US dollars at the time of transaction.

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NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

NOTE 16 FINANCIAL RISK MANAGEMENT (CONTINUED)

Based on financial instruments held in a foreign currency at 31 December 2021 and 31 December 2020, had the Australian dollar strengthened/weakened by 10% there an increase/decrease in the US net assets by \$40,885 (2020: \$40,390) and an increase/decrease in the Canadian net assets by \$4,302 (2020: \$20,453). The exposure to foreign exchange is considered to be immaterial as the majority of the foreign liabilities relate to related party payables which are eliminated on consolidation.

Credit risk

Credit risk is the risk of financial loss to the Group if a customer or counterparty to a financial instrument fails to meet its contractual obligations. This arises principally from cash and cash equivalents and trade and other receivables. The Group exposure and the credit ratings of its counterparties are continuously monitored by the Board of Directors. The maximum exposure to credit risk at the reporting date is the carrying amount of the financial assets as summarised in the table above.

Credit risk exposures

Trade and other receivables

Trade and other receivables comprise receivables from the sale of products and services to predominantly unrelated entities. All potential customers are rated for credit worthiness, taking into account their size, market position and financial standing. The receivable balances are monitored on an ongoing basis. The Group's exposure to bad debts is not significant. At 31 December 2021 \$19,294 (2020: \$144,132) of the Group's receivables were past due.

Cash and cash equivalents, restricted cash and term deposits

The Group has a significant concentration of credit risk with respect to cash deposits with banks. However, significant cash deposits are invested across three to four banks to mitigate credit risk exposure to a particular bank. AAA rated banks are mostly used and non AA banks are utilised where commercially attractive returns are available.

The Group does not have any material credit risk exposure to any single receivable or Group of receivables under arrangements entered into by the Group.

Price risk

Price risk relates to the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in market prices.

The Group is exposed to commodity price risk. Commodity prices can be volatile and are influenced by factors beyond the Group's control. No hedging or derivative transactions have been used to manage commodity price risk.

Capital risk management

When managing capital, management's objective is to ensure the Group continues as a going concern and to maintain a structure that ensures the lowest cost of capital available and to ensure adequate capital is available for exploration and evaluation of tenements. In order to maintain or adjust the capital structure, the Group may seek to issue new shares. Consistent with others in the industry, the Group monitors capital on the basis of forecast exploration and evaluation expenditure required to reach a stage which permits a reasonable assessment of the existence or otherwise of an economically recoverable reserve. Total capital is calculated as 'equity' as shown in the Consolidated Statement of Financial Position.

There were no changes in the Group's approach to capital management during the year. The Group is not subject to externally imposed capital requirements.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

NOTE 16 FINANCIAL RISK MANAGEMENT (CONTINUED)

Fair value measurement

The fair value of financial assets and financial liabilities must be estimated for recognition and measurement and for disclosure purposes.

Fair value hierarchy

AASB 7 *Financial Instruments: Disclosures* requires disclosure of fair value measurements by level as determined by the following fair value measurement hierarchy:

- (a) Level 1: quoted prices (unadjusted) in active markets for identical assets or liabilities;
- (b) Level 2: inputs other than quoted prices included within level 1 that are observable for the asset or liability, either directly (as prices) or indirectly (derived from prices); and
- (c) Level 3: inputs for the asset or liability that are not based on observable market data (unobservable inputs).

Other fair value disclosures

The Directors consider that the carrying amount of trade and other receivables and trade and other payables recorded in the consolidated financial statements approximates their fair values due to their short-term nature.

The recoverable amount of the HCD CGU has been calculated using the fair value less costs of disposal method, which has been assessed using both Level 1 and Level 3 inputs. Refer to Note 4(a) for further information.

NOTE 17 EARNINGS PER SHARE

	2021	2020
	\$	\$
(a) Reconciliation of basic and diluted earnings per share:		
From continuing operations	(0.84)	(0.62)
From discontinued operation	0.08	0.00
Total basic earnings per share attributable to the ordinary equity holders of the company	(0.76)	(0.62)
(b) Reconciliation of earnings used in calculating basic and diluted earnings per share:		
Loss attributable to the ordinary equity holders of the Company used in calculating basic and diluted earnings per share:		
From continuing operations	(3,691,027)	(2,045,039)
From discontinued operation	326,588	(7,226)
	(3,364,439)	(2,052,265)
(c) Weighted average number of ordinary shares used as the denominator:		
Weighted average number of ordinary shares used in calculating basic earnings per share	440,271,099	333,500,151
<i>Adjustments for the calculation of diluted earnings per share:</i>		
Option / performance rights	-	-
	-	-
Weighted average number of ordinary shares used in calculating dilutive earnings per share	440,271,099	333,500,151

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

NOTE 17 EARNINGS PER SHARE

Options and performance rights are considered to be “potential ordinary shares” and have been included in the determination of diluted earnings per share to the extent to which they are dilutive. Details relating to options and performance rights are set out in Note 14.

NOTE 18 COMMITMENTS

There are no commitments as at 31 December 2021 (2020: Nil).

NOTE 19 CONTINGENT LIABILITIES

The Group is party to a royalty agreement with Director Mr Nicholas Castellano, whereby the Group is obliged to pay a monthly royalty equal to the greater of:

- (a) US\$20,000; subject to adjustment as described below; or
- (b) 5% of net revenue (gross revenue minus taxes and commissions) from the HCD business.

Until the amount of US\$19.5 million is paid in full.

The minimum royalty instalment described above was adjusted due to a material change in the business, in which a customer (“the Customer”) elected to stop using Multi-Flow, causing a reduction in ongoing revenue. The parties agreed that the minimum royalty instalment be reduced from USD\$20,000 per month to USD\$16,000 per month, until HCD has entered into a firm contract with either:

- (a) the Customer and/or a related party of the Customer for the sale by HCD of at least 140 drums of Multi-Flow per month for a minimum period of 6 months; or
- (b) one or more credible third parties other than the Customer and/or a related party of the Customer for the sale by the Group of at least 35 drums of Multi-Flow per month for a minimum period of 6 months.

The royalty agreement is non-recourse and may be terminated by either party at any time without penalty. Royalty payments to date have been expensed as incurred.

NOTE 20 SUBSEQUENT EVENTS

The Company issued a pro rata non-renounceable entitlement offer for one new share for every three shares held by Eligible Shareholders at an issue price of \$0.011 per share which closed on 14 March 2022. The total amount raised was \$1,078,232 for a total of 98,021,075 new shares. Peloton Capital has been engaged to place the shortfall.

In the opinion of the directors, there are no other events that have arisen in the interval between the end of the financial year and the date of this report that has significantly affected, or may significantly affect the Group’s operations, results or the state of affairs in future financial years.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

NOTE 21 RELATED PARTY DISCLOSURE

Related party transactions

During the year, the Group paid the following amounts to related party entities:

- \$51,993 (2020: \$12,000) of board fees to Spring Street Holdings Pty Ltd, a company associated with Ray Shorrocks.
- \$nil (2020: \$12,000) of consulting fees (in lieu of board fees) to True Success Pty Ltd, a company associated with Allan Ritchie.
- \$160,004 (2020: \$197,667) of salaries and wages and \$256,446 (2020: \$280,826) of royalties to NC2 LLC, a company associated with Nicholas Castellano. The Group has an outstanding payable of \$nil (2020: \$24,333) to NC2 LLC at balance date.
- \$144,000 (2020: \$136,500) was invoiced from Lowell Accounting Services for accounting and secretarial services and rent, an entity of which Stephen Mitchell and Julie Edwards are Directors. \$13,750 (2020: \$7,350) remains payable at balance date.
- \$27,750 (2020: \$55,500) of related party transactions were settled via the issue of shares. Refer to Note 14 for further information.

Transactions between related parties are on normal commercial terms and conditions no more favourable than those available to other parties unless otherwise stated.

Key management personnel

Key management personnel includes:

Stephen Mitchell	Non-Executive Chairman
Nicholas Castellano	Executive Director
Ray Shorrocks	Non-Executive Director
Allan Ritchie	Non-Executive Director (resigned 26 May 2021)
Andrew Seaton	Non-Executive Director
Bill Tarantino	CEO – Chemical Division
Julie Edwards ¹	Company Secretary

1. Julie Edwards is remunerated via an external accounting firm, Lowell Accounting Services Pty Ltd.

	2021	2020
	\$	\$
Short-term benefits	630,573	641,908
Long-term benefits	(5,330)	4,750
Post-employment benefits	3,273	2,064
Equity-based payments	(240,272)	409,651
	388,244	1,058,373

NOTE 22 PARENT ENTITY DISCLOSURE

The legal parent entity is Hydrocarbon Dynamics Limited. Details of the controlled entities are set out in Note 23.

Transactions with controlled entities

Transactions between Hydrocarbon Dynamics Limited and its subsidiaries during the year included:

- loans advanced to/repayments from subsidiaries; and
- investments in subsidiaries.

The loans and investments have been impaired in the accounts of the parent entity so that the net assets of the parent do not exceed the net assets of the Group. The loans to subsidiaries are interest free, repayable in cash at call and are unsecured.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

NOTE 22 PARENT ENTITY DISCLOSURE (CONTINUED)

ASSETS

Current assets	938,523	2,278,965
Non-current assets	2,793,686	5,094,695
TOTAL ASSETS	3,732,209	7,373,660

LIABILITIES

Current liabilities	59,997	100,095
Non-current liabilities	-	5,330
TOTAL LIABILITIES	59,995	105,425

NET ASSETS

3,672,212	7,268,235
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EQUITY

Issued capital	65,675,117	65,649,289
Reserves	-	444,744
Accumulated losses	(62,002,905)	(58,825,798)
TOTAL EQUITY	3,672,212	7,268,235

COMPREHENSIVE LOSS FOR THE YEAR

Loss for the year	(3,345,136)	(2,107,269)
TOTAL COMPREHENSIVE LOSS FOR THE YEAR	(3,345,136)	(2,107,269)

The parent entity did not have any contingent liabilities, contractual commitments or guarantees at 31 December 2021 (2020: nil). The parent entity's accounting policies are the same as the group.

NOTE 23 GROUP STRUCTURE

The consolidated financial statements incorporate the assets, liabilities and results of the following subsidiaries in accordance with the accounting policy described in Note 3(a).

Name of entity	Country of incorporation	Class of shares	Equity holding % ¹	
			2021	2020
HCD Brazil Pty Ltd	Australia	Ordinary	100	100
Hydrocarbon Dynamics Australia Pty Ltd	Australia	Ordinary	100	100
HCD Canada Ltd	Canada	Ordinary	100	100
HCDI Holdings Ltd	Hong Kong	Ordinary	100	100
Hydrocarbon Dynamics Ltd	Hong Kong	Ordinary	100	100
HCD Offshore SDN BND	Malaysia	Ordinary	100	100
Hydrocarbon Dynamics UK Ltd	Canada	Ordinary	100	100
HCD Blending LLC	USA	Ordinary	100	100
Indago Oil and Gas Inc	USA	Ordinary	100	100
TOC LLC dba Triopco LLC	USA	Ordinary	100	100
Trimissco LLC	USA	Ordinary	100	100

1. percentage of voting power is in proportion to ownership interest.

DIRECTORS' DECLARATION

In the Directors' opinion:

1. the attached consolidated financial statements and notes are in accordance with the *Corporations Act 2001*, including:
 - a. complying with Australian Accounting Standards (including the Australian Accounting Interpretations) and the *Corporations Regulations 2001*; and
 - b. giving a true and fair view of the financial position as at 31 December 2021 and of the performance for the year ended on that date of the Group.
2. As stated in Note 2, the consolidated financial statements also comply with International Financial Reporting Standards.
3. There are reasonable grounds to believe that the Group will be able to pay its debts as and when they become due and payable.

The Directors have been given the declarations by the Managing Director and Financial Controller required by section 295A of the *Corporations Act 2001*.

This declaration is made in accordance with a resolution of the Board of Directors.

Stephen Mitchell
Chairman
Melbourne, Victoria
30 March 2022

Independent Auditor's Report to the Members of Hydrocarbon Dynamics Limited Report on the Audit of the Financial Report

Opinion

We have audited the financial report of Hydrocarbon Dynamics Limited ("the Company") and its controlled entities ("the Group"), which comprises the consolidated statement of financial position as at 31 December 2021, the consolidated statement of profit or loss and other comprehensive income, the consolidated statement of changes in equity and the consolidated statement of cash flows for the year then ended, and notes to the financial statements, including a summary of significant accounting policies, and the directors' declaration.

In our opinion, the accompanying financial report of the Group is in accordance with the *Corporations Act 2001*, including:

- (a) giving a true and fair view of the Group's financial position as at 31 December 2021 and of its financial performance for the year then ended; and
- (b) complying with Australian Accounting Standards and the *Corporations Regulations 2001*.

Basis for Opinion

We conducted our audit in accordance with Australian Auditing Standards. Our responsibilities under those standards are further described in the *Auditor's Responsibilities for the Audit of the Financial Report* section of our report. We are independent of the Group in accordance with the auditor independence requirements of the *Corporations Act 2001* and the ethical requirements of the Accounting Professional and Ethical Standards Board's APES 110 *Code of Ethics for Professional Accountants (including Independence Standards)* ("the Code") that are relevant to our audit of the financial report in Australia. We have also fulfilled our other ethical responsibilities in accordance with the Code.

We confirm that the independence declaration required by the *Corporations Act 2001*, which has been given to the directors of the Group, would be in the same terms if given to the directors as at the time of this auditor's report.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Material Uncertainty Related to Going Concern

We draw attention to note 2 in the financial report which states that the ability of the Group to continue as a going concern is dependent on its ability to successfully raise funds through debt, equity or the commercialisation of its HCD product.

As stated in note 2, these events or conditions indicate that a material uncertainty exists that may cast significant doubt on the Group's ability to continue as a going concern. Our opinion is not modified in respect of this matter.

Key Audit Matters

Key audit matters are those matters that, in our professional judgement, were of most significance in our audit of the financial report of the current period. These matters were addressed in the context of our audit of the financial report as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

Key audit matter	How our audit addressed the matter
IMPAIRMENT OF INTANGIBLE ASSETS Refer to Note 4 and 12: Intangible Assets	
<p>The Group acquired 100% of the issued shares in HCDI Holdings Limited ('HCD') in April 2017, upon which goodwill and intellectual property were recognised in the Group's consolidated statement of financial position with a carrying value of \$3,282,899 and \$663,218 respectively.</p> <p>The Group recognised \$2,156,902 impairment expense in the consolidated statement of profit or loss and other comprehensive income for the year ended 31 December 2021. Goodwill of \$1,125,997 and intellectual property of \$663,218 remains in the consolidated statement of financial position at 31 December 2021.</p> <p>The directors assessed the goodwill and intellectual property for impairment at 31 December 2021. As disclosed in Note 4 to the financial report, the assessment of the impairment of the Group's goodwill and intellectual property incorporated key estimates and judgements.</p> <p>As these balances constitute 46% of the total assets of the Group and the use of key estimates and judgments in the assessment of any potential impairment, this is a key area of audit focus.</p>	<p>Our procedures included, amongst others:</p> <ul style="list-style-type: none"> ▪ Understanding and evaluating the design and operating effectiveness of the controls pertaining to goodwill and intellectual property; ▪ Assessing management's determination of the Group's Cash Generating Units ("CGUs") based on our understanding of the Group's business and internal reporting; ▪ Evaluating management's impairment assessment of goodwill and other identifiable intangible assets by challenging the key inputs and assumptions used by management; ▪ Challenging the appropriateness of the market approach (fair value less costs of disposal) valuation method used to determine the fair value in accordance with AASB 13 <i>Fair Value</i>; ▪ Assessing the carrying value of the Group's CGU to which goodwill and intellectual property have been allocated with regard to the Group's enterprise value at 31 December 2021; and ▪ Assessing the adequacy of the Group's disclosures and impairment assessment methodology disclosed in note 4 and 12 to the financial report.

Other Information

The directors are responsible for the other information. The other information comprises the information included in the Group's annual report for the year ended 31 December 2021, but does not include the financial report and our auditor's report thereon.

Our opinion on the financial report does not cover the other information and accordingly we do not express any form of assurance conclusion thereon.

In connection with our audit of the financial report, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial report or our knowledge obtained in the audit or otherwise appears to be materially misstated.

If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

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Responsibilities of the Directors for the Financial Report

The directors of the Company are responsible for the preparation of the financial report that gives a true and fair view in accordance with Australian Accounting Standards and the *Corporations Act 2001* and for such internal control as the directors determine is necessary to enable the preparation of the financial report that gives a true and fair view and is free from material misstatement, whether due to fraud or error. In preparing the financial report, the directors are responsible for assessing the ability of the Group to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the directors either intend to liquidate the Group or to cease operations, or has no realistic alternative but to do so.

Auditor's Responsibilities for the Audit of the Financial Report

Our objectives are to obtain reasonable assurance about whether the financial report as a whole is free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with the Australian Auditing Standards will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of this financial report.

As part of an audit in accordance with the Australian Auditing Standards, we exercise professional judgement and maintain professional scepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the financial report, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Group's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the directors.
- Conclude on the appropriateness of the directors' use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial report or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the financial report, including the disclosures, and whether the financial report represents the underlying transactions and events in a manner that achieves fair presentation.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the financial report. We are responsible for the direction, supervision and performance of the Group audit. We remain solely responsible for our audit opinion.

We communicate with the directors regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide the directors with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, actions taken to eliminate threats or safeguards applied.

From the matters communicated with the directors, we determine those matters that were of most significance in the audit of the financial report of the current period and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

REPORT ON THE REMUNERATION REPORT

Opinion on the Remuneration Report

We have audited the Remuneration Report included on pages 6 to 12 of the directors' report for the year ended 31 December 2021. In our opinion, the Remuneration Report of Hydrocarbon Dynamics Limited, for the year ended 31 December 2021, complies with section 300A of the *Corporations Act 2001*.

Responsibilities

The directors of the Company are responsible for the preparation and presentation of the Remuneration Report in accordance with section 300A of the *Corporations Act 2001*. Our responsibility is to express an opinion on the Remuneration Report, based on our audit conducted in accordance with Australian Auditing Standards.

Pitcher Partners
PITCHER PARTNERS

J. Evans
JASON EVANS
Partner

Brisbane, Queensland
30 March 2022

HYDROCARBON DYNAMICS LIMITED

(ABN 75 117 387 354)

SHAREHOLDER INFORMATION

Additional information required by the Australian Securities Exchange Ltd Listing Rules and not disclosed elsewhere in this report is as follows. The information is current as at 16 March 2021.

1. Substantial shareholders

The number of securities held by substantial shareholders and their associates are set out below:

Fully paid Ordinary Shares

Name	Number	%
Stephen Mitchell	44,780,499	10.18
Sterling McGregor Super Pty Ltd	38,782,790	8.81

2. Number of security holders and securities on issue

Hydrocarbon Dynamics Limited has issued the following equity securities:

440,290,105 fully paid ordinary shares held by 1,698 shareholders;

46,269,645 unlisted options, expiring 31 October 2022, held by 318 option holders

3. Voting rights

Ordinary shares

The voting rights attached to ordinary shares are that on a show of hands, every member present, in person or proxy, has one vote and upon a poll, each share shall have one vote.

Incentive Rights and Options

The holders of Incentive Rights and Options do not have any voting rights on the Rights held by them.

4. Distribution of security holders

Quoted securities

Fully paid ordinary shares

Category	Fully paid ordinary shares		
	Holders	Shares	%
1 - 1,000	407	190,996	0.04
1,001 - 5,000	306	805,467	0.18
5,001 - 10,000	100	745,900	0.17
10,001 - 100,000	515	21,293,081	4.84
100,001 and over	370	417,254,662	94.77
Total	1,698	440,290,106	100.00

HYDROCARBON DYNAMICS LIMITED

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Unquoted securities

Unlisted Options exercisable @ 3c expiring 31 October 2022

Category	Incentive Rights		
	Holders	Options	%
1 - 1,000	29	7,864	0.02
1,001 - 5,000	55	165,500	0.36
5,001 - 10,000	30	237,876	0.51
10,001 - 100,000	119	5,593,627	12.09
100,001 and over	85	40,264,778	87.02
Total	318	46,269,645	100.00

5. Unmarketable parcel of shares

The number of security investors holding less than a marketable parcel of securities is 1,136 with a combined total of 9,351,810 securities.

6. Twenty largest shareholders of quoted equity securities

Fully paid ordinary shares

Details of the 20 largest shareholders by registered shareholding are:

	Name	No. of shares	%
1	STIRLING MCGREGOR SUPER PTY LTD <STIRLING MCGREGOR SUPER A/C>	38,782,790	8.81%
2	MALANGI PTY LTD	37,580,497	8.54%
3	EQUITY TRUSTEES LIMITED <LOWELL RESOURCES FUND A/C>	17,438,107	3.96%
4	WHEELBARROW INVESTMENTS PTY LTD <WILLIAM BURRELL FAMILY A/C>	14,427,202	3.28%
5	CHAG PTY LTD	14,170,834	3.22%
6	HSBC CUSTODY NOMINEES (AUSTRALIA) LIMITED	10,518,591	2.39%
7	YAVERN CREEK HOLDINGS PTY LTD	9,200,000	2.09%
8	G & J SUPER FUND PTY LTD <G & J SUPER FUND A/C>	8,192,784	1.86%
9	MUTUAL TRUST PTY LTD	7,969,152	1.81%
10	MR S MITCHELL & MRS S MITCHELL <S P MITCHELL SUPER FUND A/C>	7,200,002	1.64%
11	SPRING STREET HOLDINGS PTY LTD	6,169,230	1.40%
12	TITUS ENERGY LIMITED	6,168,140	1.40%
13	BUDERIM PANORAMA PTY LTD	6,019,170	1.37%
14	MR BRUCE JAMES SEYMOUR	6,000,000	1.36%
15	J & R CLARK SUPER FUND PTY LTD <J C H C PERSONAL S/F A/C>	5,170,295	1.17%
16	SAYERS INVESTMENTS (ACT) PTY LIMITED <THE SAYERS INVEST NO 2 A/C>	5,170,000	1.17%
17	MR GEERT DE VRIES	5,000,000	1.14%
18	MR CHARLES TULLOCH ARTHUR	4,000,000	0.91%
19	MR JAMIE ROBERT WHATELEY	3,900,000	0.89%
20	MR NICK CARTER	3,717,442	0.84%
	Total	216,794,236	49.24%

HYDROCARBON DYNAMICS LIMITED

(ABN 75 117 387 354)

CORPORATE DIRECTORY

Registered and Principal Office

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Website: www.hydrocarbodynamics.com

Share Registry

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Level 5, 126 Phillip Street
SYDNEY NSW 2000

Phone: 1300 288 664

Fax: +61 2 9698 5414

Auditors

Pitcher Partners
Level 38, Central Plaza,
345 Queen Street
Brisbane QLD 4000

Stock Exchange

Australian Securities Exchange Limited (ASX)
Code: HCD

Australian Company Number

117 387 354

Australian Business Number

75 117 387 354