

27 January 2022

December 2021 Quarterly Activities and Cash-Flow Report

Summary

- Australian Cooper Basin Trial Update
- North Central Texas Trial Update
- Two New Distributors Appointed
- Sales and Marketing Progress
- Testing Update
- Continued Assessment of New Energy and Energy Technology Projects

Cooper Basin Trial Update

HCD recently concluded a successful 6-month trial on a waxy field in the Cooper Basin, achieving the key objective of mitigating production loss issues stemming from paraffin build up. HCD's team have reviewed the results with the producer and expect the latter to provide the final report and endorsement soon so that HCD can update the market. Verbal communication is very positive, however meaningful success will be determined if the producer makes a follow-up purchase for the 2022 season.

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

North Central Texas Trial Update

As a follow-up to HCD's ASX release on 18 November 2021, one of HCD's Texas based distributors kicked off a paraffin control trial in a North Central Texas oil field on 23 December 2021. A paraffin coupon placed just downstream of the treated well was used to monitor the HCD Multi-Flow's effectiveness. It was pulled and found to be perfectly clean, suggesting that the chemical was doing what it was designed to. However, when selecting the well for trial, the distributor was unaware that two other wells were tied into the flowline downstream of the well being trialled and that these wells, not treated with HCD Multi-Flow, continued to affect the flowline pressure rendering the results inconclusive. The Distributor's Vice President of Technical Services and their Innovation Manager both feel that the well selection was a mistake and remain excited about our technology. They are actively in search of alternate locations to trial our technology including:

- Southern Texas paraffin control
- Permian Basin Tri-Phase squeeze
- Two different locations in North Dakota, a pipeline, and a field paraffin control

We expect another trial to start in the next one to two months.

Sales & Marketing Progress

- Distributor relationships continued to progress as HCD moved to add two new distributors in the fourth quarter of 2021, one based in Dubai focusing on the Middle East and Africa and a second is USA based company focusing on key US oil & gas regions.
- Our new Dubai based distributor is targeting tank cleaning and production system well remediation and deposit control opportunities in the Middle East and Africa. This group organised a joint meeting with a national oil company in North Africa to present our capabilities with a focus on Kleen-Flow tank cleaning technology. The national oil company is interested in HCD's differential technology and there is a good possibility that it could lead to a tank cleaning trial. They also expressed interest in other areas of application in their production, transportation, and storage system for immediate needs.
- HCD continues to make progress toward trialling our technology on a North Sea platform suffering from severe paraffin deposition related issues for a large global energy company. As previously reported, after successful head-to-head laboratory evaluation of HCD Multi-Flow against the incumbent supplier's paraffin inhibitor and paraffin dissolver products, HCD was given a verbal commitment to trial HCD's technology once the required North Sea approvals and registration are achieved. HCD is making headway toward meeting these requirements. Once approvals and registration have been completed, which has been delayed due to Covid and can take an additional 6 months, HCD expects the trial to commence. If this trial proves successful, a second platform with comparable issues could follow.
- A US supermajor oil and gas company is testing our chemistry for viscosity reduction 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 HCD Multi-Flow's ability to lower crude oil viscosity and consequently reduce diluent requirements. Positive results will lead to discussions with operations for the purpose of running a pilot test.
- Our India based distributor with a significant presence in South America is working on a heavy oil viscosity reduction opportunity in Central Colombia with a leading independent Latin American oil and gas operator. Following positive laboratory analysis on the producer's heavy oil, HCD's distributor recommended a paid pilot test with HCD technology, and the operator has shown strong interest. The proposed pilot is to reduce the amount of diluent needed to meet viscosity pipeline specification. HCD is waiting for confirmation from the operator for a paid pilot on a 15,000 bpd pipeline spur.
- Advanced discussions are also 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 required for crude oil mobility. The distributor has presented our differential technology and recommendations which includes laboratory evaluation utilizing a wax flow loop, trialling on a risk-free spur, and validation of our chemistry by trialling anywhere there is build-up of wax deposits across the producer's hydrocarbon recovery and transfer system, including perforations, wellbore, production tubing, transfer lines, processing equipment, and storage tanks as an evaluation step.

- Our APAC agent is working with a company awarded a significant contract with a national oil company to develop innovative sludge treatment solutions that enhance recovery of hydrocarbons from crude oil and product tanks. HCD's goal is to provide a cost-effective chemical sludge treatment solution that adds value through the efficient and effective recovery of crude oil. Work has begun to prepare for the laboratory evaluation phase.

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 of HCD Multi-Flow for a large North Sea application.

CEFAS certification documentation, which is required for HCD to progress the North Sea opportunity, has recently been submitted. Progress has been delayed due to Covid and certification can take an additional 6 months.

Umbilical certification is also in progress with HCD Multi-Flow meeting or exceeding approval specifications in all testing areas except for one final umbilical test. Modifications of this test have been suggested and resubmitted to the certification laboratory for a final run of this test to attain umbilical certification.

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

A "Gunking Test" will be performed on HCD Multi-Flow to attain gas lift certification for an opportunity in the DJ Basin of Colorado by one of HCD's new distributors.

Also pending is a series of tests for sludge characterization and composition required for the APAC sludge treatment opportunity outlined in the Sales & Marketing Progress section above.

Finance

At the end of the quarter HCD had \$1.394m in cash reserves and no debt.

Related party transactions during the quarter were for approximately \$87,000 in Director's fees and \$88,000 in royalty payments.

HCD does not hold any tenements as at 31 December 2021.

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ASX Code: HCD

Appendix 5B

Mining exploration entity or oil and gas exploration entity quarterly cash flow report

Name of entity

Hydrocarbon Dynamics Limited

ABN

75 117 387 354

Quarter ended ("current quarter")

31 December 2021

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (12 months) \$A'000
1.	Cash flows from operating activities		
1.1	Receipts from customers	(8)	166
1.2	Payments for		
	(a) exploration & evaluation (if expensed)	(55)	(188)
	(b) development		
	(c) production	(41)	(191)
	(d) staff costs	(198)	(755)
	(e) administration and corporate costs	(106)	(559)
1.3	Dividends received (see note 3)		
1.4	Interest received	-	3
1.5	Interest and other costs of finance paid	-	-
1.6	Income taxes paid	-	(75)
1.7	Government grants and tax incentives	-	147
1.8	Other (Royalty)	(88)	(279)
1.9	Net cash from / (used in) operating activities	(496)	(1,731)

2.	Cash flows from investing activities		
2.1	Payments to acquire:		
	(a) entities		
	(b) tenements		
	(c) property, plant and equipment		
	(d) exploration & evaluation (if capitalised) (prior quarters reallocated to operating activities)		
	(e) investments		
	(f) other non-current assets		

Consolidated statement of cash flows	Current quarter \$A'000	Year to date (12 months) \$A'000
2.2 Proceeds from the disposal of:		
(a) entities		
(b) tenements	-	685
(c) property, plant and equipment		
(d) investments		
(e) other non-current assets		
2.3 Cash flows from loans to other entities		
2.4 Dividends received (see note 3)		
2.5 Other (Bond)	-	-
2.6 Net cash from / (used in) investing activities	-	685

3. Cash flows from financing activities		
3.1 Proceeds from issues of equity securities (excluding convertible debt securities)	-	-
3.2 Proceeds from issue of convertible debt securities		
3.3 Proceeds from exercise of options		
3.4 Transaction costs related to issues of equity securities or convertible debt securities	-	(2)
3.5 Proceeds from borrowings		
3.6 Repayment of borrowings		
3.7 Transaction costs related to loans and borrowings		
3.8 Dividends paid		
3.9 Other (provide details if material)		
3.10 Net cash from / (used in) financing activities	-	(2)

4. Net increase / (decrease) in cash and cash equivalents for the period		
4.1 Cash and cash equivalents at beginning of period	1,890	2,442
4.2 Net cash from / (used in) operating activities (item 1.9 above)	(496)	(1,731)
4.3 Net cash from / (used in) investing activities (item 2.6 above)	-	685
4.4 Net cash from / (used in) financing activities (item 3.10 above)	-	(2)

Mining exploration entity or oil and gas exploration entity quarterly cash flow report

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (12 months) \$A'000
4.5	Effect of movement in exchange rates on cash held	-	-
4.6	Cash and cash equivalents at end of period	1,394	1,394

5.	Reconciliation of cash and cash equivalents at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts	Current quarter \$A'000	Previous quarter \$A'000
5.1	Bank balances	1,093	1,022
5.2	Call deposits	301	868
5.3	Bank overdrafts		
5.4	Other (provide details)		
5.5	Cash and cash equivalents at end of quarter (should equal item 4.6 above)	1,394	1,890

6. Payments to related parties of the entity and their associates

- 6.1 Aggregate amount of payments to related parties and their associates included in item 1
- 6.2 Aggregate amount of payments to related parties and their associates included in item 2

Current quarter \$A'000
(175)
-

Note: if any amounts are shown in items 6.1 or 6.2, your quarterly activity report must include a description of, and an explanation for, such payments

Mining exploration entity or oil and gas exploration entity quarterly cash flow report

7. Financing facilities	Total facility amount at quarter end \$A'000	Amount drawn at quarter end \$A'000
<i>Note: the term "facility" includes all forms of financing arrangements available to the entity. Add notes as necessary for an understanding of the sources of finance available to the entity.</i>		
7.1 Loan facilities		
7.2 Credit standby arrangements		
7.3 Other (please specify)		
7.4 Total financing facilities		

7.5 Unused financing facilities available at quarter end	
7.6 Include in the box below a description of each facility above, including the lender, interest rate, maturity date and whether it is secured or unsecured. If any additional financing facilities have been entered into or are proposed to be entered into after quarter end, include a note providing details of those facilities as well.	

8. Estimated cash available for future operating activities	\$A'000
8.1 Net cash from / (used in) operating activities (Item 1.9)	(496)
8.2 Capitalised exploration & evaluation (Item 2.1(d))	-
8.3 Total relevant outgoings (Item 8.1 + Item 8.2)	(496)
8.4 Cash and cash equivalents at quarter end (Item 4.6)	1,394
8.5 Unused finance facilities available at quarter end (Item 7.5)	-
8.6 Total available funding (Item 8.4 + Item 8.5)	1,394
8.7 Estimated quarters of funding available (Item 8.6 divided by Item 8.3)	2.8

8.8	If Item 8.7 is less than 2 quarters, please provide answers to the following questions:	
	1. Does the entity expect that it will continue to have the current level of net operating cash flows for the time being and, if not, why not?	
	2. Has the entity taken any steps, or does it propose to take any steps, to raise further cash to fund its operations and, if so, what are those steps and how likely does it believe that they will be successful?	
	3. Does the entity expect to be able to continue its operations and to meet its business objectives and, if so, on what basis?	

Compliance statement

- 1 This statement has been prepared in accordance with accounting standards and policies which comply with Listing Rule 19.11A.
- 2 This statement gives a true and fair view of the matters disclosed.

Date: 27 January 2022

Authorised: By the Board

Notes

1. This quarterly cash flow report and the accompanying activity report provide a basis for informing the market about the entity's activities for the past quarter, how they have been financed and the effect this has had on its cash position. An entity that wishes to disclose additional information over and above the minimum required under the Listing Rules is encouraged to do so.
2. If this quarterly cash flow report has been prepared in accordance with Australian Accounting Standards, the definitions in, and provisions of, *AASB 6: Exploration for and Evaluation of Mineral Resources* and *AASB 107: Statement of Cash Flows* apply to this report. If this quarterly cash flow report has been prepared in accordance with other accounting standards agreed by ASX pursuant to Listing Rule 19.11A, the corresponding equivalent standards apply to this report.
3. Dividends received may be classified either as cash flows from operating activities or cash flows from investing activities, depending on the accounting policy of the entity.
4. If this report has been authorised for release to the market by your board of directors, you can insert here: "By the board". If it has been authorised for release to the market by a committee of your board of directors, you can insert here: "By the [name of board committee – eg Audit and Risk Committee]". If it has been authorised for release to the market by a disclosure committee, you can insert here: "By the Disclosure Committee".
5. If this report has been authorised for release to the market by your board of directors and you wish to hold yourself out as complying with recommendation 4.2 of the ASX Corporate Governance Council's *Corporate Governance Principles and Recommendations*, the board should have received a declaration from its CEO and CFO that, in their opinion, the financial records of the entity have been properly maintained, that this report complies with the appropriate accounting standards and gives a true and fair view of the cash flows of the entity, and that their opinion has been formed on the basis of a sound system of risk management and internal control which is operating effectively.