

28 July 2023

June 2023 Quarterly Activities Report

Summary

- Cooper Basin repeat order received
- Canadian trial expanded and converted to ongoing business
- Small trial commenced in North Dakota
- Gulf of Mexico Trials on two offshore platforms continue
- First Purchase Order from new distributor in Texas
- Update on existing trials and purchase orders
- Rights issue completed
- Discussions with new distributors and agents continue
- Sales and marketing progress
- Continued assessment of new energy and energy technology projects for investment

Cooper Basin Repeat Order

On 1 May 2023 HCD announced that it had received a repeat Purchase Order from a large Australian producer. The Purchase Order for approximately A\$100,000 of HCD Multi-Flow is for the producers' 2023 seasonal paraffin control treatment that takes place during the winter months.

The program performed very well through June 2023 with a 50% reduction in production loss reported versus the same period in 2022. The producer is now considering HCD Multi-Flow for its Queensland oilfield operation that is experiencing paraffin related issues.

HCD is also running flow loop testing on one of the producers' overseas asset projects. The incumbent oilfield chemical companies have been unable to resolve severe wax deposition problems and the producer is interested in HCD Multi-Flow as a potential remedy.

Alberta, Canada Trial Expanded and Converted to Ongoing Business

On 21 April 2023 HCD announced that it had received feedback from one of its Canadian distributors on a paraffin control field trial with a large independent Canadian oil & gas producer. As reported previously, positive outcomes had led to an expansion of the trial from 1 well to 9 wells. Consequently, they have placed an additional order for approximately A\$37,000 of product to continue the trial.

HCD's Alberta, Canada distributor has further reported that continuous, positive results have led to an additional expansion from 9 active wells to 14 wells. It was also reported that these wells are now off trial mode and are considered to be ongoing business. The distributor is blending HCD Multi-Flow as the key component in their wax inhibitor product and plan to formulate another product with a higher percentage of HCD Multi-Flow in an attempt to reduce or eliminate the need for emulsion breaker at both wells and infield facilities.

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The distributor has reported that the product is performing well as they have seen more consistent times on the plungers and cleaner pigs. The distributor is focused on securing a contract for the chemical treatment for the entire field of approximately 100 wells.

After the success of HCD Multi-Flow treatment, the distributor is in the process of incorporating HCD Multi-Flow into several of their other existing products. The distributor kicked off a trial of straight HCD Multi-Flow on a 3-well pad in the Cardium formation to test its effectiveness as a straight product versus blended with other inhibitors.

The distributor also sent waxy condensate from a large producer in Alberta's Montney Formation for wax flow loop testing with HCD Multi-Flow.

Small Trial Commenced in North Dakota

On 26 April 2023 HCD announced that its new distributor, based in Minot, North Dakota informed HCD that they started injecting HCD Multi-Flow on 1 well in the Bakken formation for a midsized independent oil & gas producer.

No issues have been reported after 3 months of HCD Multi-Flow chemical injection. Pump cards and the lack of need to do mechanical cleaning indicate that HCD Multi-Flow is working well.

The producer has approximately 100 similar waxy wells in the region that can be addressed with HCD technology upon successful trials.

First Purchase Order from a new Texas based distributor

On 5 May 2023 HCD announced that it had received an initial Purchase Order from a new Texas based distributor. The distributor's client will use HCD Multi-Flow in more than one application in the highly paraffinic Uinta Basin of Utah to test its efficacy controlling production and operating problems associated with the 'green wax' of the Uinta Basin. Wax issues are so severe that crude oil must be transported to refineries via heated trucks and production fields suffer from wax deposition and high crude oil viscosity related issues. This represents a prime opportunity for HCD to showcase its exclusive chemistry.

Trials will start after kick-off meetings with HCD's distributor and the end user which are anticipated to occur in the current quarter.

This basin has been specifically targeted by HCD as part of its ongoing strategy to focus on regions and basins that utilise high volumes of paraffin inhibitor and remediation chemical usage and where HCD's unique technology can demonstrate its efficacy. The initial PO was for ~\$11,000 of product.

Gulf of Mexico Trial Expanded to Two Offshore Platforms

On 21 April 2023 HCD announced that it had received feedback from its customer, a mid-sized producer in the Gulf of Mexico, on two separate field trials to control paraffin deposition related issues. The purpose of the first trial was to reduce the paraffin build up in the production tubing between wax cuttings on this 500 bopd well. The trial was scheduled to run for 90 days.

After injecting HCD Multi-Flow, the producer reported that the system was very clean and showed little to no paraffin. The customer decided to continue the treatment for the remainder of the 90-day period to see if the system remained clean.

The first trial well was cut for paraffin 90 days after the prior cutting and HCD Multi-Flow was found to have completely inhibited the formation of wax. The product did however appear to interfere with the gas-lift operation. Assumptions are that HCD Multi-Flow's antifoam properties affected the gas-lift operation or that the chemical's demulsification properties caused oil/water separation downhole, which in turn affected gas-lift operations on this well. As a result, HCD Multi-Flow injection was stopped on this well.

Although it wasn't apparent that this phenomenon is occurring on the second trial well, the customer plans to test this well to ensure that HCD Multi-Flow is not adversely affecting gas-lift operation and therefore production. The test will show HCD Multi-Flow's affect on this well's gas-lift operation, if any, to determine if the issue observed on the first well was an isolated case.

The operator is very impressed with the chemical's ability to reduce and eliminate the formation of paraffin wax and is now working toward trialling HCD in a spur pipeline.

Update on HCD Multi-Flow Trials and Purchase Orders

North Sea Purchase Order

As per HCD's March 2023 Activity Report, 40 drums of HCD Multi-Flow arrived in Aberdeen in April 2023 and are awaiting Cefas registration needed to apply the chemical in the North Sea for a large national European energy company. This producer's platform is suffering from an acute paraffin deposition problem resulting in significant lost production.

HCD has applied for a temporary trial approval, as well as full product registration from Cefas in an effort to expedite the North Sea chemical approval process. HCD is hopeful that this drawn out approval process will conclude before the end of the current quarter.

New HCD Tank Cleaning Order for the UAE

In the March 2023 Quarterly Activities Report, HCD reported that the paid tank cleaning job with a large national oil company operating in the United Arab Emirates was delayed due to organizational changes. The tank cleaning, which will employ approximately A\$135,000 of Kleen-Flow chemistry, is back on track and is expected to be undertaken in the fourth quarter, after the end of the hot season. As previously reported, the chemical for this cleaning has been purchased and delivered to the UAE.

There is a potential for 5 additional tanks to be cleaned with HCD's Kleen-Flow chemistry to start upon a successful cleaning job.

Update on Purchase Orders for India

As reported in the March 2023 Activity Report, HCD received a purchase order for Tri-Phase Squeeze on 4 wells from an independent oil and gas producer and a Letter of Award (LOA) from a second independent producer for Tri-Phase Squeeze on 1 well. All wells are in Gujarat and payment is based on success criteria being met. The trials will employ HCD's Tri-Phase Squeeze technology to restore production and enhance oil recovery on a declining well.

HCD is still working with the producers to work out import details before shipping of chemicals commences.

Rights Issue

On 16 May 2023 HCD announced that the Rights Issue closed with good support from shareholders in a difficult market. The Issue received subscriptions for a total of \$751,265 being 62,605,411 New Shares and 62,605,411 New Options.

The Company and its advisor, Peloton Capital, will consider the placement of the shortfall of 84,159,714 New Shares and attaching options representing \$1,009,916 subject to improved market conditions.

The Company's pro rata non-renounceable entitlement offer was for one New Share for every 4 shares held by Eligible Shareholders at an issue price of \$0.012 per share and one New Option for every New Share issued, exercisable at 2 cents and expiring on 12 May 2025. The Rights Issue closed at 5:00pm AEST on 12 May 2023.

Sales & Marketing Progress

HCD and its distributors have made good progress with sales and marketing activity during the quarter. The following potential sales opportunities are at various stages and include:

- HCD reported in the March 2023 Activities Report that its new Oklahoma based distributor is close to starting a paraffin control trial with an independent producer in Bakersfield, California. The trial was delayed by personnel changes and looks to be back on track. The distributor now expects a purchase order for the one well paraffin remediation/inhibition trial in the current quarter.

If the trial meets expectations, up to an additional 70 waxy wells could be suitable for treatment. The distributor continues to work toward Tri-Phase Squeeze production enhancement trials on 3 to 4 wells.

- As reported in the March quarterly activity report, HCD is progressing with a small start-up producer in Australia to trial HCD Multi-Flow for pour point reduction of their high pour point crude. The producer must first secure an offtake agreement and government approvals before production and the HCD pour point reduction trial commences.
- HCD continues to make strong progress toward working together with a US supermajor oil & gas company. The Permian Basin team of a US supermajor oil & gas company plans to trial HCD Multi-Flow chemistry on several wells experiencing paraffin related issues including increased pressure in

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flowlines and the need for hot oiling. One well has been identified as a trial candidate in the Carlsbad, New Mexico area of the Delaware Basin with others being investigated.

The supermajor O&G company has also committed to in-house testing of HCD Multi-Flow for asphaltene remediation and inhibition.

- Activity has picked up with HCD's new, Dubai based distributor who markets chemicals to oilfield chemical companies in the Middle East and Egypt. Prospects for sales in the region with this distributor before the end of the year are increasing.

Testing Update

Laboratory testing remains fundamental to HCD's product development and marketing efforts.

Achieving North Sea Cefas registration of HCD Multi-Flow and utilising wax flow loop testing to drive sales opportunities continues to be a key focus. As mentioned in the North Sea Purchase Order section above, in addition to full Cefas product registration, HCD has applied for a temporary trial approval to expedite the North Sea HCD Multi-Flow trial. HCD hopes to have the Cefas trial approval granted before the end of the third quarter.

Crude Oil samples from HCD's Australian customer and Canadian distributor are on their way to an independent laboratory for flow loop testing with HCD Multi-Flow. Positive results are expected to lead to sales.

In addition, a US supermajor oil & gas company who positively tested HCD Multi-Flow on their Permian Basin crude oil intends to test the chemistry on asphaltic crude oil to test its efficacy on remediating and inhibiting asphaltenes.

Finance

At the end of the quarter HCD had \$1.37m in cash reserves and no debt.

Related party transactions during the quarter were for approximately \$82,000 in Director's fees and \$98,000 in royalty payments.

This release has been approved by the Board of Directors.

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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")

30 June 2023

Consolidated statement of cash flows	Current quarter \$A'000	Year to date (6 months) \$A'000
1. Cash flows from operating activities		
1.1 Receipts from customers	180	230
1.2 Payments for		
(a) exploration & evaluation	(10)	(13)
(b) development	-	-
(c) production	(48)	(89)
(d) staff costs	(199)	(405)
(e) administration and corporate costs	(213)	(296)
1.3 Dividends received (see note 3)	-	-
1.4 Interest received	4	9
1.5 Interest and other costs of finance paid	-	-
1.6 Income taxes paid	-	-
1.7 Government grants and tax incentives	-	-
1.8 Other (royalties)	(98)	(168)
1.9 Net cash from / (used in) operating activities	(384)	(732)
2. Cash flows from investing activities		
2.1 Payments to acquire or for:		
(a) entities	-	-
(b) tenements	-	-
(c) property, plant and equipment	-	-
(d) exploration & evaluation	-	-
(e) investments	-	-
(f) other non-current assets	-	-

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 (6 months) \$A'000
2.2	Proceeds from the disposal of:		
	(a) entities	-	-
	(b) tenements	-	-
	(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 (provide details if material)	-	-
2.6	Net cash from / (used in) investing activities	-	-

3.	Cash flows from financing activities		
3.1	Proceeds from issues of equity securities (excluding convertible debt securities)	751	751
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	(25)	(25)
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	726	726

4.	Net increase / (decrease) in cash and cash equivalents for the period	342	(6)
4.1	Cash and cash equivalents at beginning of period	1,035	1,381
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(384)	(732)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	-	-
4.4	Net cash from / (used in) financing activities (item 3.10 above)	726	726

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 (6 months) \$A'000
4.5	Effect of movement in exchange rates on cash held	(3)	(1)
4.6	Cash and cash equivalents at end of period	1,374	1,374

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	570	735
5.2	Call deposits	804	300
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)	1,374	1,035

6.	Payments to related parties of the entity and their associates	Current quarter \$A'000
6.1	Aggregate amount of payments to related parties and their associates included in item 1	(180)
6.2	Aggregate amount of payments to related parties and their associates included in item 2	

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 <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>	Total facility amount at quarter end \$A'000	Amount drawn at quarter end \$A'000
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)	(384)
8.2 (Payments for exploration & evaluation classified as investing activities) (item 2.1(d))	-
8.3 Total relevant outgoings (item 8.1 + item 8.2)	(384)
8.4 Cash and cash equivalents at quarter end (item 4.6)	1,374
8.5 Unused finance facilities available at quarter end (item 7.5)	-
8.6 Total available funding (item 8.4 + item 8.5)	1,374
8.7 Estimated quarters of funding available (item 8.6 divided by item 8.3)	3.58
<i>Note: if the entity has reported positive relevant outgoings (ie a net cash inflow) in item 8.3, answer item 8.7 as "N/A". Otherwise, a figure for the estimated quarters of funding available must be included in item 8.7.</i>	
8.8 If item 8.7 is less than 2 quarters, please provide answers to the following questions:	
8.8.1 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?	
Answer:	
8.8.2 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?	
Answer:	

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

8.8.3 Does the entity expect to be able to continue its operations and to meet its business objectives and, if so, on what basis?

Answer:

Note: where item 8.7 is less than 2 quarters, all of questions 8.8.1, 8.8.2 and 8.8.3 above must be answered.

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: 28 July 2023

Authorised by: 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.