

# **ARROW EXPLORATION CORP.**

**MANAGEMENT'S DISCUSSION AND ANALYSIS  
YEAR ENDED DECEMBER 31, 2022**





## MANAGEMENT'S DISCUSSION AND ANALYSIS

This Management's Discussion and Analysis ("MD&A") as provided by the management of Arrow Exploration Corp. ("Arrow" or the "Company"), is dated as of April 28, 2023 and should be read in conjunction with Arrow's annual consolidated financial statements and related notes for the year ended December 31, 2022 and 2021. Additional information relating to Arrow is available under Arrow's profile on [www.sedar.com](http://www.sedar.com).

### Advisories

#### Basis of Presentation

*The condensed consolidated financial statements have been prepared in accordance with International Financial Reporting Standards ("IFRS"), and all amounts herein are expressed in United States dollars, unless otherwise noted, and all tabular amounts are expressed in United States dollars, unless otherwise noted. Additional information for the Company may be found on SEDAR at [www.sedar.com](http://www.sedar.com).*

#### Advisory Regarding Forward-Looking Statements

*This MD&A contains certain statements or disclosures relating to Arrow that are based on the expectations of its management as well as assumptions made by and information currently available to Arrow which may constitute forward-looking statements or information ("forward-looking statements") under applicable securities laws. All such statements and disclosures, other than those of historical fact, which address activities, events, outcomes, results or developments that Arrow anticipates or expects may, could or will occur in the future (in whole or in part) should be considered forward-looking statements. In some cases, forward-looking statements can be identified by the use of the words "believe", "continue", "could", "expect", "likely", "may", "outlook", "plan", "potential", "will", "would" and similar expressions. In particular, but without limiting the foregoing, this MD&A contains forward-looking statements pertaining to the following: the COVID-19 pandemic and its impact; tax liability; capital management strategy; capital structure; credit facilities and other debt; performance by Canacol (as defined herein) and the Company in connection with the Note (as defined herein) and letters of credit; Arrow's costless collar structure;; cost reduction initiatives; potential drilling on the Tapir block; capital requirements; expenditures associated with asset retirement obligations; future drilling activity and the development of the Rio Cravo Este structure on the Tapir Block. Statements relating to "reserves" and "resources" are deemed to be forward-looking information, as they involve the implied assessment, based on certain estimates and assumptions, that the reserves and resources described exist in the quantities predicted or estimated and can be profitably produced in the future.*

*The forward-looking statements contained in this MD&A reflect several material factors and expectations and assumptions of Arrow including, without limitation: current and anticipated commodity prices and royalty regimes; the impact of the COVID-19 pandemic; the financial impact of Arrow's costless collar structure; availability of skilled labour; timing and amount of capital expenditures; future exchange rates; commodity prices; the impact of increasing competition; general economic conditions; availability of drilling and related equipment; receipt of partner, regulatory and community approvals; royalty rates; changes in income tax laws or changes in tax laws and incentive programs; future operating costs; effects of regulation by governmental agencies; uninterrupted access to areas of Arrow's operations and infrastructure; recoverability of reserves; future production rates; timing of drilling and completion of wells; pipeline capacity; that Arrow will have sufficient cash flow, debt or equity sources or other financial resources required to fund its capital and operating expenditures and requirements as needed; that Arrow's conduct and results of operations will be consistent with its expectations; that Arrow will have the ability to develop its oil and gas properties in the manner currently contemplated; current or, where applicable, proposed industry conditions, laws and regulations will continue in effect or as anticipated; that the estimates of Arrow's reserves and production volumes and the assumptions related thereto (including commodity prices and development costs)*



are accurate in all material respects; that Arrow will be able to obtain contract extensions or fulfil the contractual obligations required to retain its rights to explore, develop and exploit any of its undeveloped properties; and other matters.

Arrow believes the material factors, expectations and assumptions reflected in the forward-looking statements are reasonable at this time but no assurance can be given that these factors, expectations and assumptions will prove to be correct. The forward-looking statements included in this MD&A are not guarantees of future performance and should not be unduly relied upon.

Such forward-looking statements involve known and unknown risks, uncertainties and other factors that may cause actual results or events to differ materially from those anticipated in such forward-looking statements including, without limitation: the impact of the COVID-19 pandemic; the impact of general economic conditions; volatility in commodity prices; industry conditions including changes in laws and regulations including adoption of new environmental laws and regulations, and changes in how they are interpreted and enforced; competition; lack of availability of qualified personnel; the results of exploration and development drilling and related activities; obtaining required approvals of regulatory authorities; counterparty risk; risks associated with negotiating with foreign governments as well as country risk associated with conducting international activities; commodity price volatility; fluctuations in foreign exchange or interest rates; environmental risks; changes in income tax laws or changes in tax laws and incentive programs; changes to pipeline capacity; ability to secure a credit facility; ability to access sufficient capital from internal and external sources; risk that Arrow's evaluation of its existing portfolio of development and exploration opportunities is not consistent with future results; that production may not necessarily be indicative of long term performance or of ultimate recovery; and certain other risks detailed from time to time in Arrow's public disclosure documents including, without limitation, those risks identified in Arrow's 2018 AIF, a copy of which is available on Arrow's SEDAR profile at [www.sedar.com](http://www.sedar.com). Readers are cautioned that the foregoing list of factors is not exhaustive and are cautioned not to place undue reliance on these forward-looking statements.

#### **Non-IFRS Measures**

The Company uses non-IFRS measures to evaluate its performance which are measures not defined in IFRS. Working capital, funds flow from operations, realized prices, operating netback, adjusted EBITDA, and net debt as presented do not have any standardized meaning prescribed by IFRS and therefore may not be comparable with the calculation of similar measures for other entities. The Company considers these measures as key measures to demonstrate its ability to generate the cash flow necessary to fund future growth through capital investment, and to repay its debt, as the case may be. These measures should not be considered as an alternative to, or more meaningful than net income or cash provided by (used in) operating activities or net income and comprehensive income as determined in accordance with IFRS as an indicator of the Company's performance. The Company's determination of these measures may not be comparable to that reported by other companies.

Adjusted working capital is calculated as current assets minus current liabilities, excluding non-cash liabilities; funds from operations is calculated as cash flows from (used in) operating activities adjusted to exclude changes in non-cash working capital balances; realized price is calculated by dividing gross revenue by gross production, by product, in the applicable period; operating netback is calculated as total natural gas and crude revenues minus royalties, transportation costs and operating expenditures; adjusted EBITDA is calculated as net income adjusted for interest, income taxes, depreciation, depletion, amortization and other similar non-recurring or non-cash charges; and net debt is defined as the principal amount of its outstanding debt, less working capital items excluding non-cash liabilities.

The Company also presents funds from operations per share, whereby per share amounts are calculated using weighted-average shares outstanding consistent with the calculation of net income per share.

A reconciliation of the non-IFRS measures is included as follows:



(in United States dollars)	Three months ended December 31, 2022	Year ended December 31, 2022	Three months ended December 31, 2021	Year ended December 31, 2021
<b>Net income</b>	<b>2,968,117</b>	<b>346,524</b>	6,960,035	5,693,532
<b>Add/(subtract):</b>				
Share based payments	<b>367,693</b>	<b>582,405</b>	241,438	(84,668)
Financing costs:				
Accretion on decommissioning obligations	<b>55,274</b>	<b>199,521</b>	34,160	132,807
Interest	<b>92,320</b>	<b>460,233</b>	246,449	797,943
Other	<b>45,693</b>	<b>330,797</b>	(76,358)	46,216
Depreciation and depletion	<b>1,878,557</b>	<b>5,528,489</b>	511,813	1,622,937
Derivative income	<b>1,005,740</b>	<b>5,974,674</b>	(467,507)	(467,507)
Impairment reversal of oil and gas properties	<b>(9,020,654)</b>	<b>(9,020,654)</b>	(5,617,776)	(5,617,776)
Income tax expense (recovery) , current and deferred	<b>7,064,017</b>	<b>8,091,110</b>	(1,291,612)	(1,318,810)
<b>Adjusted EBITDA <sup>(1)</sup></b>	<b>4,456,757</b>	<b>12,493,099</b>	540,642	804,674
<b>Cash flows provided by (used in) operating activities</b>	<b>7,011,946</b>	<b>12,036,550</b>	(922,307)	(4,506,160)
<b>Minus - Changes in non-cash working capital balances:</b>				
Trade and other receivables	<b>(1,519,574)</b>	<b>1,928,707</b>	(327,190)	(1,817,008)
Restricted cash	<b>220,588</b>	<b>86,228</b>	-	(262,489)
Taxes receivable	<b>(279,138)</b>	<b>82,129</b>	(900,017)	(940,634)
Deposits and prepaid expenses	<b>(4,412)</b>	<b>(164,840)</b>	113,602	244,917
Inventory	<b>38</b>	<b>458,613</b>	(137,252)	217,759
Accounts payable and accrued liabilities	<b>(1,980,243)</b>	<b>(3,445,263)</b>	1,770,157	6,918,112
Income tax payable	<b>(1,488,916)</b>	<b>(1,488,916)</b>	-	-
<b>Funds flow from (used in) operations <sup>(1)</sup></b>	<b>1,960,289</b>	<b>9,493,208</b>	(403,007)	(145,503)

<sup>(1)</sup>Non-IFRS measures

The term barrel of oil equivalent (“boe”) is used in this MD&A. Boe may be misleading, particularly if used in isolation. A boe conversion ratio of 6 thousand cubic feet (“Mcf”) of natural gas to one barrel of oil (“bbl”) is used in the MD&A. This conversion ratio of 6:1 is based on an energy equivalency conversion method primarily applicable at the burner tip and does not represent a value equivalency at the wellhead.



## FINANCIAL AND OPERATING HIGHLIGHTS

(in United States dollars, except as otherwise noted)	Three months ended December 31, 2022	Year ended December 31, 2022	Three months ended December 31, 2021	Year ended December 31, 2021
Total natural gas and crude oil revenues, net of royalties	8,931,562	24,973,464	3,038,832	6,512,493
Funds flow from (used in) operations <sup>(1)</sup>	1,960,289	9,493,208	(403,007)	(145,503)
Funds flow from (used in) operations <sup>(1)</sup> per share –				
Basic(\$)	0.01	0.04	(0.00)	(0.00)
Diluted (\$)	0.01	0.03	(0.00)	(0.00)
Net income	2,968,117	346,524	6,960,035	5,693,532
Net income per share –				
Basic (\$)	0.01	0.00	0.04	0.06
Diluted (\$)	0.01	0.00	0.04	0.06
Adjusted EBITDA <sup>(1)</sup>	4,456,757	12,493,099	540,642	804,674
Weighted average shares outstanding:				
Basic	217,784,100	215,468,129	171,345,885	94,553,391
Diluted	288,239,348	279,288,480	173,035,572	96,243,078
Common shares end of period	218,401,931	218,401,931	213,389,623	213,389,623
Capital expenditures	2,106,463	7,668,988	1,991,163	2,221,643
Cash and cash equivalents	13,060,968	13,060,968	10,878,508	10,878,508
Current assets	17,504,225	17,504,225	12,806,502	12,806,502
Current liabilities	18,820,890	18,820,890	4,800,428	4,800,428
Adjusted working capital <sup>(1)</sup>	8,223,758	8,223,758	8,006,074	8,006,074
Long-term portion of restricted cash and deposits <sup>(2)</sup>	608,127	608,127	-	-
Total assets	53,190,248	53,190,248	41,195,798	41,195,798
<b>Operating</b>				
<b>Natural gas and crude oil production, before royalties</b>				
Natural gas (Mcf/d)	3,270	2,958	442	530
Natural gas liquids (bbl/d)	6	5	5	6
Crude oil (bbl/d)	1,185	847	62	367
<b>Total (boe/d)</b>	<b>1,736</b>	<b>1,345</b>	<b>140</b>	<b>461</b>
<b>Operating netbacks (\$/boe) <sup>(1)</sup></b>				
Natural gas (\$/Mcf)	\$0.57	\$1.01	\$1.05	\$0.51
Crude oil (\$/bbl)	\$57.88	\$65.06	(\$98.26)	\$2.85
<b>Total (\$/boe)</b>	<b>\$41.95</b>	<b>\$42.40</b>	<b>(\$39.03)</b>	<b>\$3.16</b>

<sup>(1)</sup>Non-IFRS measures – see “Non-IFRS Measures” section within this MD&A

<sup>(2)</sup>Long term restricted cash not included in working capital



## The Company

Arrow is a junior oil and gas company engaged in the acquisition, exploration and development of oil and gas properties in Colombia and Western Canada. The Company's shares trade on the TSX Venture Exchange and the London AIM exchange under the symbol AXL.

The Company and Arrow Exploration Ltd. entered into an arrangement agreement dated June 1, 2018, as amended, whereby the parties completed a business combination pursuant to a plan of arrangement under the *Business Corporations Act (Alberta)* ("ABCA") on September 28, 2018. Arrow Exploration Ltd. and Front Range's then wholly-owned subsidiary, 2118295 Alberta Ltd., were amalgamated to form Arrow Holdings Ltd., a wholly-owned subsidiary of the Company (the "Arrangement"). On May 31, 2018, Arrow Exploration Ltd. entered in a share purchase agreement, as amended, with Canacol Energy Ltd. ("Canacol"), to acquire Canacol's Colombian oil properties held by its wholly-owned subsidiary Carrao Energy S.A. ("Carrao"). On September 27, 2018, Arrow Exploration Ltd. closed the agreement with Canacol.

On May 31, 2018, Arrow Exploration Ltd., entered into a purchase and sale agreement to acquire a 50% beneficial interest in a contract entered into with Ecopetrol S.A. pertaining to the exploration and production of hydrocarbons in the Tapir block from Samaria Exploration & Production S.A. ("Samaria"). On September 27, 2018, Arrow Exploration Ltd. closed the agreement with Samaria. As at December 31, 2022 the Company held an interest in six oil blocks in Colombia and oil and natural gas leases in seven areas in Canada as follows:

		Gross Acres	Working Interest	Net Acres
<b>COLOMBIA</b>				
Tapir	Operated <sup>1</sup>	65,125	50%	32,563
Oso Pardo	Operated	672	100%	672
Ombu	Non-operated	56,482	10%	5,648
COR-39	Operated	95,111	100%	95,111
Los Picachos	Non-operated	52,772	37.5%	19,790
Macaya	Non-operated	195,255	37.5%	73,221
<b>Total Colombia</b>		<b>465,417</b>		<b>227,005</b>
<b>CANADA</b>				
Ansell	Operated	640	100%	640
Fir	Non operated	7,680	32%	2,457
Penhold	Non-operated	480	13%	61
Pepper	Operated	23,680	100%	23,680
Wapiti	Non-operated	1,280	13%	160
<b>Total Canada</b>		<b>33,760</b>		<b>26,998</b>
<b>TOTAL</b>		<b>499,177</b>		<b>254,003</b>



The Company's primary producing assets are located in Colombia in the Tapir, Oso Pardo and Ombu blocks, with natural gas production in Canada at Fir and Pepper, Alberta.

### ***Llanos Basin***

Within the Llanos Basin, the Company is engaged in the exploration, development and production of oil within the Tapir block. In the Llanos Basin most oil accumulations are associated with three-way dip closure against NNE-SSW trending normal faults and can have pay within multiple reservoirs. The Tapir block contain large areas not yet covered by 3D seismic, and in Management's opinion offer substantial exploration upside.

<sup>1</sup>The Company's interest in the Tapir block is held through a private contract with Petrolco, who holds a 50% participating interest in, and is the named operator of, the Tapir contract with Ecopetrol. The formal assignment to the Company is subject to Ecopetrol's consent. The Company is the *de facto* operator pursuant to certain agreements with Petrolco (details of which are set out in Paragraph 16.13 of the Company's AIM Admission Document dated October 20, 2021).

### ***Middle Magdalena Valley ("MMV") Basin***

#### ***Oso Pardo Field***

The Oso Pardo Field is located in the Santa Isabel Block in the MMV Basin. It is a 100% owned property operated by the Company. The Oso Pardo field is located within a Production Licence covering 672 acres. Three wells have been drilled to date within the licensed area.

#### ***Ombu E&P Contract – Capella Conventional Heavy Oil Discovery***

The Caguan Basin covers an area of approximately 60,000 km<sup>2</sup> and lies between the Putumayo and Llanos Basins. The primary reservoir target is the Upper Eocene aged Mirador formation. The Capella structure is a large, elongated northeast-southwest fault-related anticline, with approximately 17,500 acres in closure at the Mirador level. The field is located approximately 250 km away from the nearest offloading station at Neiva, where production from Capella is trucked.

The Capella No. 1 discovery well was drilled in July 2008 and was followed by a series of development wells. The Company earned a 10% working interest in the Ombu E&P Contract by paying 100% of all activities associated with the drilling, completion, and testing of the Capella No. 1 well.

### ***Fir, Alberta***

The Company has an average non-operated 32% WI in 12 gross (3.84 net) sections of oil and natural gas rights and 17 gross (4.5 net) producing natural gas wells at Fir. The wells produce raw natural gas into the Cecilia natural gas plant where it is processed.

### ***Pepper, Alberta***

The Company holds a 100% operated WI in 37 sections of Montney P&NG rights on its Pepper asset in West Central Alberta. The 6-26-53-23W5M Montney gas well (West Pepper) is tied into the Galloway gas plant for processing. The 3-21-52-22W5M Montney gas well (East Pepper) is currently tied into the Sundance gas plant for processing. The majority of lands have tenure extending into 2025.

### **Year ended December 31, 2022 Financial and Operational Highlights**

- For the year ended December 31, 2022, Arrow recorded \$24,973,464 in revenues, net of royalties, on crude oil sales of 285,465 bbls, 1,946 bbls of natural gas liquids ("NGL's") and 1,079,620 Mcf of natural gas sales;
- Funds flow from operations of \$9,493,208;
- Adjusted EBITDA was \$12,493,099;



- Net income of \$346,524;
- Drilled two wells in the Tapir block, increasing its production significantly
- Brought on production stream the East Pepper well.

### Three Months Ended December 31, 2022 Financial and Operational Highlights

- For the three months ended December 31, 2022, Arrow recorded \$8,931,562 in revenues, net of royalties, on crude oil sales of 120,486 bbls, 512 bbls of natural gas liquids (“NGL’s”) and 300,802 Mcf of natural gas sales;
- Funds used in operations of \$1,960,289;
- Adjusted EBITDA for the three months was \$4,456,757;
- Net income of \$2,968,117

### Annual 2022 Reserve Highlights

- 3,376 Mboe of Proved Reserves, net increase of 11% when compared to 2021;
- 7,691 Mboe of Proved plus Probable Reserves, net decrease of 4% when compared to 2021;
- Proved reserves estimated net present value, before income taxes, of US\$58 million using a 10% discount rate;
- Proved plus Probable Reserves estimated net present value, before income taxes, of US\$127 million using a 10% discount rate

## RESULTS OF OPERATIONS

The Company has increased its production and improved its operations combined with improved pricing of energy commodities. These have allowed the Company to continue improving its balance sheet and its business profile. During 2022, the Company increased its production in its Tapir block, from the drilling of the RCE-2 and RCS-1 wells, and Oso Pardo blocks, with its Ombu block maintaining a steady production. Also, the West Pepper well was consistently producing throughout 2022 and the East Pepper Well was brought on stream, increasing the Company’s natural gas production in Canada.

### Average Production by Property

Average Production Boe/d	YTD 2022	Q4 2022	Q3 2022	Q2 2022	Q1 2022	Q4 2021
Oso Pardo	113	115	104	112	121	123
Ombu (Capella)	182	238	215	97	177	190
Rio Cravo Este (Tapir)	551	832	860	366	136	142
<b>Total Colombia</b>	<b>847</b>	<b>1,185</b>	1,179	575	434	455
Fir, Alberta	82	79	82	86	73	82
Pepper, Alberta	416	472	242	319	636	181
<b>TOTAL (Boe/d)</b>	<b>1,345</b>	<b>1,736</b>	1,503	980	1,144	719

For the three months and year ended December 31, 2022, the Company’s average production was 1,736 and 1,345 boe/d, respectively, which consisted of crude oil production in Colombia at 1,185 and 847 bbl/d, natural gas production of 3,270 and 2,958 Mcf/d, respectively, and minor amounts of natural gas liquids from the Company’s Canadian properties. The Company’s Q4 2022 total production was 142% higher than its total production for the same period in 2021.





### Average Daily Natural Gas and Oil Production and Sales Volumes

	Three months ended December 31		Year ended December 31	
	2022	2021	2022	2021
<b>Natural Gas (Mcf/d)</b>				
Natural gas production	3,270	1,550	2,958	704
Natural gas sales	3,270	1,550	2,958	704
<b>Realized Contractual Natural Gas Sales</b>	<b>3,270</b>	<b>1,550</b>	<b>2,958</b>	<b>704</b>
<b>Crude Oil (bbl/d)</b>				
Crude oil production	1,185	455	847	344
Inventory movements and other	238	78	(64)	(54)
<b>Crude Oil Sales</b>	<b>1,424</b>	<b>533</b>	<b>782</b>	<b>290</b>
<b>Corporate</b>				
Natural gas production (boe/d)	545	256	493	117
Natural Gas Liquids(bbl/d)	6	0	5	7
Crude oil production (bbl/d)	1,185	455	847	344
<b>Total production (boe/d)</b>	<b>1,736</b>	<b>712</b>	<b>1,345</b>	<b>468</b>
Inventory movements and other (boe/d)	238	78	(64)	(54)
<b>Total Corporate Sales (boe/d)</b>	<b>1,974</b>	<b>789</b>	<b>1,280</b>	<b>414</b>

During the year and three months ended December 31, 2022 the majority of production was attributed to Colombia, where all of Company's blocks were producing. In Canada, the Company has two operated and two non-operated properties located in the province of Alberta at Fir, Pepper, Harley and Wapiti.

### Natural Gas and Oil Revenues

	Three months ended December 31		Year ended December 31	
	2022	2021	2022	2021
<b>Natural Gas</b>				
Natural gas revenues	1,099,986	479,232	4,257,282	820,430
NGL revenues	34,978	56,657	154,744	145,019
Royalties	(150,638)	(41,568)	(648,060)	(84,554)
<b>Revenues, net of royalties</b>	<b>984,327</b>	<b>494,321</b>	<b>3,763,966</b>	<b>880,895</b>
<b>Crude Oil</b>				
Crude Oil revenues	8,710,005	2,720,772	23,723,228	6,199,231
Royalties	(762,770)	(176,261)	(2,513,730)	(567,633)
<b>Revenues, net of royalties</b>	<b>7,947,235</b>	<b>2,544,511</b>	<b>21,209,498</b>	<b>5,631,598</b>
<b>Corporate</b>				
Natural gas revenues	1,099,986	479,232	4,257,282	820,430
NGL revenues	34,978	56,657	154,744	145,019
Oil revenues	8,710,005	2,720,772	23,723,228	6,199,231
Total revenues	9,844,970	3,256,661	28,135,254	7,164,679
Royalties	(913,408)	(217,829)	(3,161,790)	(652,187)
<b>Natural gas and crude oil revenues, net of royalties</b>	<b>8,931,562</b>	<b>3,038,832</b>	<b>24,973,464</b>	<b>6,512,493</b>



Natural gas and crude oil revenues, net of royalties, for the three months and the year ended December 31, 2022 was \$8,931,562 and \$24,973,464, respectively (2021: \$3,038,832 and \$6,512,493, respectively), which represent an increase of 194% and 283%, respectively. This significant increase is mainly due to increased production in both segments, Colombia and Canada, combined with improved pricing for energy commodities.

### Average Benchmark and Realized Prices

	Three months ended December 31			Years ended December 31		
	2022	2021	Change	2022	2021	Change
<b>Benchmark Prices</b>						
AECO (\$/Mcf)	\$4.42	\$3.89	14%	\$4.34	\$2.91	49%
Brent (\$/bbl)	\$88.59	\$79.80	11%	\$98.89	\$70.78	40%
West Texas Intermediate (\$/bbl)	\$82.65	\$77.31	7%	\$94.25	\$68.09	38%
<b>Realized Prices</b>						
Natural gas, net of transportation (\$/Mcf)	\$3.66	\$3.37	9%	\$3.94	\$3.19	23%
Natural gas liquids (\$/bbl)	\$68.28	\$56.43	21%	\$79.52	\$54.01	47%
Crude oil, net of transportation (\$/bbl)	\$72.29	\$55.50	30%	\$83.10	\$58.62	42%
<b>Corporate average, net of transport (\$/boe)<sup>(1)</sup></b>	<b>\$57.53</b>	<b>\$44.15</b>	<b>30%</b>	<b>\$60.20</b>	<b>\$47.37</b>	<b>27%</b>

<sup>(1)</sup>Non-IFRS measure

The Company realized a price of \$57.53 and \$60.20 per boe during the three months and year ended December 31, 2022, respectively (2021: \$44.15 and \$47.37, respectively) as commodity prices improved during 2022.

### Operating Expenses

	Three months ended December 31		Years ended December 31	
	2022	2021	2022	2021
Natural gas & NGL's	778,767	218,557	2,521,700	347,421
Crude oil	973,224	1,392,310	2,637,368	1,998,618
<b>Total operating expenses</b>	<b>1,751,991</b>	<b>1,610,867</b>	<b>5,159,068</b>	<b>2,346,039</b>
Natural gas (\$/Mcf)	\$2.59	\$1.15	\$2.34	\$1.35
Crude oil (\$/bbl)	\$8.08	\$17.48	\$9.24	\$18.90
<b>Corporate (\$/boe)<sup>(1)</sup></b>	<b>\$10.24</b>	<b>\$13.85</b>	<b>\$11.04</b>	<b>\$15.51</b>

<sup>(1)</sup>Non-IFRS measure

During the three months and year ended December 31, 2022, Arrow incurred operating expenses of \$1,751,991 and \$5,159,068, respectively (2021: \$1,610,867 and \$2,346,039, respectively), at an average cost of \$10.24 and \$11.04 per boe (2021: \$13.85 and \$15.51, respectively) which is reflective of the Company's increase in production volumes and decrease on a per barrel basis when compared to 2021 levels.



## Operating Netbacks

	Three months ended December 31		Years ended December 31	
	2022	2021	2022	2021
<b>Natural Gas (\$/Mcf)</b>				
Revenue, net of transportation expense	\$3.66	\$3.37	\$3.94	\$3.19
Royalties	(0.50)	(0.34)	(0.60)	(0.33)
Operating expenses	(2.59)	(1.15)	(2.34)	(1.35)
<b>Natural Gas Operating netback<sup>(1)</sup></b>	<b>\$0.57</b>	<b>\$1.87</b>	<b>\$1.01</b>	<b>\$1.51</b>
<b>Crude oil (\$/bbl)</b>				
Revenue, net of transportation expense	\$72.29	\$55.50	\$83.10	\$58.62
Royalties	(6.33)	(3.60)	(8.81)	(5.37)
Operating expenses	(8.08)	(17.48)	(9.24)	(18.90)
<b>Crude Oil Operating netback<sup>(1)</sup></b>	<b>\$57.88</b>	<b>\$34.42</b>	<b>\$65.06</b>	<b>\$34.35</b>
<b>Corporate (\$/boe)</b>				
Revenue, net of transportation expense	\$57.53	\$44.15	\$60.20	\$47.37
Royalties	(5.34)	(2.95)	(6.77)	(4.31)
Operating expenses	(10.24)	(13.85)	(11.04)	(15.51)
<b>Corporate Operating netback<sup>(1)</sup></b>	<b>\$41.95</b>	<b>\$27.35</b>	<b>\$42.40</b>	<b>\$27.55</b>

<sup>(1)</sup>Non-IFRS measure

The operating netbacks of the Company continued improving during 2022 due to several factors, such as increasing production from both its Colombian and Canadian assets, and improved crude oil and natural gas prices, which were offset by increases in royalties and operating expenses for natural gas.

## General and Administrative Expenses (G&A)

	Three months ended December 31		Years ended December 31	
	2022	2021	2022	2021
General & administrative expenses	2,146,000	1,840,646	7,285,135	4,972,290
G&A recovered from 3 <sup>rd</sup> parties	(172,169)	(91,177)	(561,934)	(91,177)
<b>Total G&amp;A</b>	<b>1,973,831</b>	<b>1,749,469</b>	<b>6,723,201</b>	<b>4,881,113</b>
<b>G&amp;A per boe</b>	<b>\$11.53</b>	<b>\$23.72</b>	<b>\$14.39</b>	<b>\$32.27</b>

For the three months and year ended December 31, 2022, G&A expenses, before recoveries totaled \$2,146,000 and \$7,285,135, respectively (2021: \$1,840,646 and \$4,972,290, respectively), which represents an increase when compared to the same periods in 2021. This increase is mainly due to increased salaries and performance bonuses paid to personnel and legal fees during 2022, as well as increase in regulatory and marketing expenses associated with the Company's dual listing in the London and Canadian markets. Despite these increased expenses, and due to the Company's increased production, there is a decrease in G&A expenses on a per barrel basis, when compared versus 2021.



## Share-based Compensation

	Three months ended December 31		Years ended December 31	
	2022	2021	2022	2021
<b>Share-based compensation expense (recovery)</b>	<b>367,693</b>	241,438	<b>582,405</b>	(84,668)

Share-based payments compensation expense for the three months and year ended December 31, 2022 totaled \$367,693 and \$582,405, respectively (2021: \$241,438 and recovery of \$84,668, respectively). During 2022, the Company granted 10,028,332 options (2021: 11,400,000) to its personnel, which were offset by reversal of expenses from cancelled options due to resignations of option holders. The share-based compensation expense is the result of the progressive vesting of the options granted to the Company's employees, plus the effect of cashless exercising, and net of cancellations and forfeitures, according to the company's stock-based compensation plan.

## Financing Costs

	Three months ended December 31		Years ended December 31	
	2022	2021	2022	2021
Financing expense paid or payable	<b>138,013</b>	170,091	<b>791,030</b>	844,159
Non-cash financing costs	<b>55,274</b>	34,160	<b>199,521</b>	132,807
<b>Net financing costs</b>	<b>193,287</b>	204,251	<b>990,551</b>	\$976,966

The finance expense paid or payable represents mostly interest on the promissory note due to Canacol, as partial payment for the acquisition of Carrao Energy SA and have decreased due to partial payment of the outstanding balance. In addition, financing expense includes fees and interest associated with financing of standby letters of credit on certain of the Company's Colombian blocks. The non-cash finance cost represents an increase in the present value of the decommissioning obligation for the current periods. The amount of this expense will fluctuate commensurate with the asset retirement obligation as new wells are drilled or properties are acquired or disposed.

## Depletion and Depreciation

	Three months ended December 31		Years ended December 31	
	2022	2021	2022	2021
<b>Depletion and depreciation</b>	<b>1,878,557</b>	511,813	<b>5,528,489</b>	1,662,937

Depletion and depreciation expense for the three months and year ended December 31, 2022 totaled \$1,878,557 and \$5,528,489, respectively (2021: \$511,813 and \$1,662,937, respectively). The Company uses the unit of production method and proved plus probable reserves to calculate depletion expense and this change is directly related with the increases in units produced and reversals of impairment recognized during 2021, which increased the depletable base for 2022.



### Impairment reversal of oil and gas properties, net

	Three months ended December 31		Years ended December 31	
	2022	2021	2022	2021
<b>Impairment (reversal) of oil and gas properties</b>	<b>(9,020,654)</b>	(5,617,776)	<b>(9,020,654)</b>	(5,617,776)

As at December 31, 2022, the Company reviewed its cash-generating units (“CGU”) for property and equipment and determined that there were indicators of impairment reversal previously recognized in its Capella block in Colombia. The company prepared estimates of fair value less costs of disposal of its Capella CGUs and determined that recoverable amounts exceeded their carrying value for \$10,409,615, which was offset by an impairment loss of \$1,388,961 determined in its Canada CGU which was mainly originated from a revision of reserves. As at December 31, 2021, the Company recognized an impairment reversal of \$5,617,776 related to its Tapir and Canada CGUs.

### Loss (gain) on Derivative Liability

	Three months ended December 31		Years ended December 31	
	2022	2021	2022	2021
<b>Loss (gain) on Derivative Liability</b>	<b>1,005,740</b>	(467,507)	<b>5,974,674</b>	(467,507)

During the three months and the year ended December 31, 2022, the Company recorded a loss in derivative liability of \$1,005,740 and \$5,974,674, respectively (2021: gain of \$467,507) related to the valuation of its outstanding warrants issued during its AIM listing and private placement completed in 2021. These warrants provide the right to holders to convert them into common shares at a fixed price set in a currency different to the Company’s functional currency and, therefore, they are considered a liability and measured at fair value with changes recognized in the statements of operations and comprehensive income.

### Other income

	Three months ended December 31		Years ended December 31	
	2022	2021	2022	2021
<b>Other income</b>	<b>(110,669)</b>	(756,242)	<b>(163,266)</b>	(2,018,382)

The Company reported other income of \$110,669 and \$163,266 for the three months and year ended December 31, 2022, respectively (2021: \$756,242 and \$2,018,382, respectively). During 2021, the Company’s recognized other income from negotiations of accounts payable and debts with vendors, both in Colombia and Canada, which have resulted in reductions of amounts actually paid in cash to settle its liabilities, including a reversal of liabilities associated with the OBC settlement.



## Income Taxes

	Three months ended December 31		Years ended December 31	
	2022	2021	2021	2021
Current income tax expense	1,401,769	176,238	2,428,862	149,040
Deferred income tax expense (recovery)	5,662,248	(1,467,850)	5,662,248	(1,467,850)
<b>Total income tax expense (recovery)</b>	<b>7,064,017</b>	<b>(1,291,612)</b>	<b>8,091,110</b>	<b>(1,318,810)</b>

During 2022, the Company recognized a total income tax expense of \$8,091,110 (2021: recovery of \$1,318,810) which consisted on \$2,428,862 of current income tax expense (2021: \$149,940) and \$5,662,248 of deferred income tax expense (2021: recovery of \$1,467,850). This increase is mainly caused by the significant improvement of the Company's net taxable income, especially in Colombia, when compared versus 2021. During 2022, the Company has recognized a deferred income tax asset balance of \$872,286 (2021: \$4,839,785) and a deferred tax liability balance of \$5,066,684 (2021: \$3,371,936) which represents the tax impact of temporary differences and management's estimation of current tax benefits that would be realized to compensate future taxable income.

## LIQUIDITY AND CAPITAL RESOURCES

### Capital Management

The Company's objective is to maintain a capital base sufficient to provide flexibility in the future development of the business and maintain investor, creditor and market confidence. The Company manages its capital structure and makes adjustments in response to changes in economic conditions and the risk characteristics of the underlying assets. The Company considers its capital structure to include share capital, debt and adjusted working capital. In order to maintain or adjust the capital structure, from time to time the Company may issue common shares or other securities, sell assets or adjust its capital spending to manage current and projected debt levels.

As at December 31, 2022, the Company has an adjusted working capital of \$8,223,758. The Company has continued improving its working capital, using its operational cash flows to continue growing its operations. The overall improvement in energy commodity prices has also positively impacted the Company's capacity to generate sufficient financial resources to sustain its operations and growth.

As at December 31, 2022 the Company's net debt was calculated as follows:

	December 31, 2022
Current assets	\$ 17,504,225
<b>Less:</b>	
Accounts payable and accrued liabilities	5,850,823
Promissory Note	1,899,294
Income taxes	1,488,916
<b>Net debt <sup>(1)</sup></b>	<b>\$ 8,265,192</b>

<sup>(1)</sup>Non-IFRS measure



## Adjusted Working Capital

As at December 31, 2022 the Company's adjusted working capital was calculated as follows:

	December 31, 2021
<b>Current assets:</b>	
Cash and restricted cash	\$ 13,060,968
Restricted cash and deposits	210,654
Trade and other receivables	2,568,290
Taxes receivable	801,177
Other current assets	863,136
<b>Less:</b>	
Accounts payable and accrued liabilities	5,850,823
Lease obligation	41,434
Promissory note	1,899,294
Income tax payable	1,488,916
<b>Working capital<sup>(1)</sup></b>	<b>\$ 8,223,758</b>

<sup>(1)</sup>Non-IFRS measure

## Debt Capital

As of December 31, 2022, the Company currently has \$1.9 million in outstanding debt in the form of a promissory note payable to Canacol and its final payment is due no later than June 30, 2023.

## Letters of Credit

At December 31, 2022, the Company had obligations under Letters of Credit ("LC's") outstanding totaling \$2.7 million to guarantee work commitments on exploration blocks and other contractual commitments. In the event the Company fails to secure the renewal of the letters of credit underlying the ANH guarantees, or any of them, the ANH could decide to cancel the underlying exploration and production contract for a particular block, as applicable. In this instance, the Company could risk losing its entire interest in the applicable block, including all capital expended to date and could possibly also incur additional abandonment and reclamation costs if applied by the ANH.

### Current Outstanding Letters of Credit

Contract	Beneficiary	Issuer	Type	Amount (US \$)	Renewal Date
SANTA ISABEL	ANH	Carrao Energy	Abandonment	\$563,894	April 14, 2024
	ANH	Carrao Energy	Financial Capacity	\$1,672,162	December 31, 2023
CORE - 39	ANH	Carrao Energy	Compliance	\$100,000	June 30, 2023
OMBU	ANH	Carrao Energy	Financial Capacity	\$436,300	April 14, 2024
<b>Total</b>				<b>\$2,772,356</b>	

## Share Capital

As at December 31, 2022, the Company had 218,401,931 common shares, 67,837,418 warrants and 20,590,000 stock options outstanding.

## RELATED PARTIES

The following table provides a summary of the Company's Director's compensation paid during the year ended December 31, 2022:



Director	Salary or Annual Fee	Bonus	Stock-Based Compensation	Total
G. Jull	309,000	250,000	126,296	<b>685,296</b>
M. Abbott	309,000	250,000	149,785	<b>708,785</b>
M. Charash	66,000	109,500	25,546	<b>201,046</b>
G. Carnie	66,000	109,500	25,546	<b>201,046</b>
R. Sharma	66,000	-	61,610	<b>127,610</b>
A. Zaidi	66,000	-	55,224	<b>121,224</b>
<b>Total</b>	<b>882,000</b>	<b>719,000</b>	<b>444,007</b>	<b>2,045,007</b>

### CONTRACTUAL OBLIGATIONS

The following table provides a summary of the Company's cash requirements to meet its financial liabilities and contractual obligations existing at December 31, 2022:

	Less than 1 year	1-3 years	Thereafter	Total
Promissory Note	\$ 1,899,294	-	-	<b>1,899,294</b>
Exploration and production contracts	-	17,800,000	-	<b>17,800,000</b>
	<b>\$ 1,899,294</b>	<b>17,800,000</b>	-	<b>19,699,294</b>

### Exploration and Production Contracts

The Company has entered into a number of exploration contracts in Colombia which require the Company to fulfill work program commitments and issue financial guarantees related thereto. In aggregate, the Company has outstanding exploration commitments at December 31, 2022 of \$17.8 million. The Company, in conjunction with its partners, have made applications to cancel \$15.5 million (\$5.79 million Arrow's share) in commitments on the Macaya and Los Picachos blocks, and its \$12 million commitment at its COR-39 block.

### SUBSEQUENT EVENTS

Effective February 9, 2023, the Agencia Nacional de Hidrocarburos ("ANH") approved the suspension of the obligations and operations of the OMBU contract due to force majeure circumstances generated by the blockades and social unrest around the Capella field. The suspension is for an initial term of three months and the Company, together with its partner and the ANH, is monitoring this suspension to define next steps.

### SUMMARY OF THREE MONTHS RESULTS

	2022				2021			
	Q4	Q3	Q2	Q1	Q4	Q3	Q2	Q1
Oil and natural gas sales, net of royalties	8,931,562	7,614,336	5,024,604	3,911,329	3,038,832	1,684,609	941,620	847,432
Net income (loss)	2,968,117	2,041,955	768,318	(5,431,865)	6,960,035	(21,782)	(734,317)	(510,405)
Income (loss) per share –								
basic	0.01	0.02	0.00	(0.03)	0.04	(0.00)	(0.01)	(0.01)
diluted	0.01	0.00	0.00	(0.02)	0.04	(0.00)	(0.01)	(0.01)
Working capital (deficit)	(1,316,665)	7,392,310	5,594,027	7,657,938	8,006,074	783,707	3,141,217	(2,659,690)
Total assets	53,190,248	46,979,259	42,670,153	39,914,240	41,195,798	25,362,323	25,948,551	27,684,920
Net capital expenditures	2,106,463	4,836,860	2,777,611	725,665	1,991,163	148,528	(15,378)	97,330
Average daily production (boe/d)	1,736	1,503	980	1,144	712	575	331	242

The Company's oil and natural gas sales have increased during 2022 due to increased production in its existing assets, improved in oil and gas prices and positive fluctuations in realized oil price differentials. The Company's production levels in Colombia have progressively improved during 2021 and 2022. Trends in the Company's net income are also impacted





most significantly by operating expenses, financing costs, income taxes, depletion, depreciation and impairment of oil and gas properties, and other income.

## OUTSTANDING SHARE DATA

At April 27, 2023, the Company had the following securities issued and outstanding:

	Number	Exercise Price	Expiry Date
Common shares	228,979,841	n/a	n/a
Warrants	57,259,507	GBP 0.09	Oct. and Nov, 2023
Stock options	750,000	CAD\$ 1.15	October 22, 2028
Stock options	270,000	CAD\$ 0.31	May 3, 2029
Stock options	1,200,000	CAD\$ 0.05	March 20, 2030
Stock options	2,000,000	CAD\$ 0.05	April 13, 2030
Stock options	2,983,332	GBP 0.07625	June 13, 2024
Stock options	2,983,336	GBP 0.07625	June 13, 2025
Stock options	766,665	CAD\$0.28	December 9, 2023
Stock options	766,667	CAD\$0.28	December 9, 2024
Stock options	766,668	CAD\$0.28	December 9, 2025
Stock options	416,666	CAD\$0.26	March 7, 2024
Stock options	416,666	CAD\$0.26	March 7, 2025
Stock options	416,668	CAD\$0.26	March 7, 2026
Stock options	1,826,110	GBP 0.1675	June 13, 2023
Stock options	1,826,111	GBP 0.1675	June 13, 2024
Stock options	1,826,111	GBP 0.1675	June 13, 2025
Stock options	216,667	GBP 0.1925	July 23, 2024
Stock options	216,667	GBP 0.1925	July 23, 2025
Stock options	216,666	GBP 0.1925	July 23, 2026

## OUTLOOK

During 2022, the Company deployed a portion of the capital raised at the time of the Admission to AIM on a successful two well drilling campaign at Rio Cravo on the Tapir Block. These results, and the subsequent generation of positive cashflows in Q3 and Q4 2022, provide Arrow with the funds required for its \$32 million capital program for 2023, including drilling of 10 wells, seismic acquisition and the development of production facilities.

To date, the Company has already drilled three wells at Rio Cravo, which have added an additional 1,500 boe/d and is currently moving its drilling rig to the Carrizales Norte location on the Tapir Block, confirming Arrow's commitment to increase production and shareholder value. The Company is able to support the planned 2023 CAPEX program with current cash on hand and cashflow from operations.

Arrow continues to focus on growth and improving its balance sheet and free cash flow.

## CRITICAL ACCOUNTING ESTIMATES

A summary of the Company's critical accounting estimates is contained in Note 3 Annual Financial Statements. These accounting policies are subject to estimates and key judgements about future events, many of which are beyond Arrow's control. The following is a discussion of the accounting estimates that are critical to the consolidated financial statements.

**Crude oil and natural gas assets - reserves estimates** – Arrow retained independent third-party petroleum engineers to evaluate its crude oil and natural gas reserves, prepare an evaluation report, and report to the Reserves Committee of the Board of Directors. The process of estimating crude oil and natural gas reserves is subjective and involves a significant number of decisions and assumptions in evaluating available geological, geophysical, engineering and economic data. These



estimates will change over time as additional data from ongoing development and production activities becomes available and as economic conditions affecting crude oil and natural gas prices and costs change. Reserves can be classified as proved, probable or possible with decreasing levels of likelihood that the reserves will be ultimately produced.

Reserve estimates are a key input to the Company's depletion calculations and impairment tests. Property, plant and equipment within each area are depleted using the unit-of-production method based on proved and probable reserves using estimated future prices and costs. In addition, the costs subject to depletion include an estimate of future costs to be incurred in developing proved and probable reserves. A revision in reserve estimates or future development costs could result in the recognition of higher depletion charged to net income.

Under the IFRS, the carrying amounts of property, plant and equipment are reviewed at each reporting date to determine whether there is any indication of impairment. If any such indication exists, the estimated recoverable amount is calculated. For the purpose of impairment testing, assets are grouped together into the smallest group of assets that generates cash inflows from continuing use that are largely independent of the cash inflows of other assets or groups of assets (the "cash-generating unit" or "CGU"). The recoverable amount of an asset or a CGU is the greater of its value in use and its fair value less costs to sell. In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset. Value in use is generally computed by reference to the present value of the future cash flows expected to be derived from production of proven and probable reserves. Exploration and evaluation ("E&E") assets will be allocated to the related CGU's to assess for impairment, both at the time of any triggering facts and circumstances as well as upon their eventual reclassification to producing assets (oil and natural gas interests in property, plant and equipment). An impairment loss is recognized in income if the carrying amount of an asset or its CGU exceeds its estimated recoverable amount. Reserve, revenue, royalty and operating cost estimates and the timing of future cash flows are all critical components of the impairment test. Revisions of these estimates could result in a write-down of the carrying amount of crude oil and natural gas properties.

**Decommissioning obligations** – The Company recognizes the estimated fair value of the decommissioning liability in the period in which it is incurred and records a corresponding increase in the carrying value of the related asset. The future asset retirement obligation is an estimate based on the Company's ownership interest in wells and facilities and reflects estimated costs to complete the abandonment and reclamation as well as the estimated timing of the costs to be incurred in future periods. Estimates of the costs associated with abandonment and reclamation activities require judgement concerning the method, timing and extent of future retirement activities. The capitalized amount is depleted on a unit-of-production method over the life of the proved and probable reserves. The liability amount is increased each reporting period due to the passage of time and this accretion amount is charged to earnings in the period, which is included as a financing expense. Actual costs incurred on settlement of the decommissioning liability are charged against the liability. Judgements affecting current and annual expense are subject to future revisions based on changes in technology, abandonment timing, costs, discount rates and the regulatory environment.

**Share based payments** – Stock options issued to employees and directors under the Company's stock option plan are accounted for using the fair value method of accounting for stock-based compensation. The fair value of the option is recognized as a share-based payment and contributed surplus over the vesting period of the option. Share based payment is determined on the date of an option grant using the Black-Scholes option pricing model. The Black-Scholes pricing model requires the estimation of several variables including estimated volatility of Arrow's stock price over the life of the option, estimated option forfeitures, estimated life of the option, estimated risk-free rate and estimated dividend rate. A change to these estimates would alter the valuation of the option and would result in a different related share-based payment.

**Income taxes** – Arrow follows the balance sheet method, providing for temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for taxation purposes. Current tax is the expect tax payable on the taxable income for the year, using tax rates enacted or substantially enacted at the reporting period, and any adjustment to tax payable in respect to previous periods. Tax interpretations and legislation in which the Company operates are subject to change. As such, income taxes are subject to measurement uncertainty and



interpretations can impact net income through current tax arising from the changes in the deferred income tax asset and liabilities.

**Provisions and contingencies** - The Company recognizes provisions based on an assessment of its obligations and available information. Any matters not included as provisions are uncertain in nature and cannot be reasonably estimated. The Company makes assumptions to determine whether obligations exist and to estimate the amount of obligations that we believe exist. In estimating the final outcome of litigation, assumptions are made about factors including experience with similar matters, past history, precedents, relevant financial, scientific, and other evidence and facts specific to the matter. This determines whether a provision or disclosure in the financial statements is needed.

## **SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES**

A summary of the Company's significant accounting policies is included in Note 3 Annual Financial Statements. These accounting policies are consistent with those of the previous financial year as described in Note 3 of the Annual Financial Statements.

## **DERIVATIVE COMMODITY CONTRACTS**

The Company holds various forms of financial instruments. The nature of these instruments and the Company's operations expose the Company to commodity price, credit and foreign exchange risks. The Company manages its exposure to these risks by operating in a manner that minimizes its exposure to the extent practical. During 2022, the Company did not have any financial derivative contract in order to manage commodity price risks.

## **RISKS AND UNCERTAINTIES**

The Company is subject to financial, business and other risks, many of which are beyond its control and which could have a material adverse effect on the business and operations of the Company. A summary of certain risk factors relating to our business are disclosed below.

### **Unstable Oil and Gas Industry**

Recent market events and conditions, including demand destruction resulting from the COVID-19 pandemic, constant changes oil and natural gas supply, actions taken by the Organization of Petroleum Exporting Countries (OPEC), slowing growth in China and other emerging economies, market volatility and disruptions in Asia, and sovereign debt levels in various countries, have caused significant weakness and volatility in commodity prices. These events and conditions have caused a significant volatility in the valuation of oil and gas companies and a variable confidence in the oil and gas industry. Lower commodity prices may also affect the volume and value of the Company's reserves especially as certain reserves become uneconomic. In addition, in a low commodity prices environment might affect the Company's cash flow. As a result, the Company may not be able to replace its production with additional reserves and both the Company's production and reserves could be reduced on a year over year basis. Given the current market conditions, the Company may have difficulty raising additional funds or if it is able to do so, it may be on unfavourable and highly dilutive terms.

### **Prices, Markets and Marketing of Crude Oil and Natural Gas**

Oil and natural gas are commodities whose prices are determined based on world demand, supply and other factors, all of which are beyond the control of Arrow. World prices for oil and natural gas have fluctuated widely in recent years. Any material decline in prices could result in a reduction of net production revenue. Certain wells or other projects may become uneconomic as a result of a decline in world oil prices and natural gas prices, leading to a reduction in the volume of Arrow's oil and gas reserves. Arrow might also elect not to produce from certain wells at lower prices. All of these factors could result in a material decrease in Arrow's future net production revenue, causing a reduction in its oil and gas acquisition and development activities.



In addition to establishing markets for its oil and natural gas, Arrow must also successfully market its oil and natural gas to prospective buyers. The marketability and price of oil and natural gas which may be acquired or discovered by Arrow will be affected by numerous factors beyond its control. Arrow will be affected by the differential between the price paid by refiners for light quality oil and the grades of oil produced by Arrow. The ability of Arrow to market its natural gas may depend upon its ability to acquire space on pipelines which deliver natural gas to commercial markets. Arrow will also likely be affected by deliverability uncertainties related to the proximity of its reserves to pipelines and processing facilities and related to operational problems with such pipelines and facilities and extensive government regulation relating to price, taxes, royalties, land tenure, allowable production, the export of oil and natural gas and many other aspects of the oil and natural gas business.

### **Substantial Capital Requirements; Liquidity**

Arrow's cash flow from its production and sales of petroleum and natural gas may not, at all times be sufficient to fund its ongoing activities. From time to time, Arrow may require additional financing in order to carry out its oil and gas acquisition, exploration and development activities. Failure to obtain such financing on a timely basis could cause Arrow to forfeit its interest in certain properties, miss certain acquisition opportunities and reduce or terminate its operations. If Arrow's revenues from its production of petroleum and natural gas decrease as a result of lower oil and natural gas prices or otherwise, it may affect Arrow's ability to expend the necessary capital to replace its reserves or to maintain its production. If Arrow's funds from operations are not sufficient to satisfy its capital expenditure requirements, there can be no assurance that additional financing will be available to meet these requirements or available on terms acceptable to Arrow.

Arrow's lenders will be provided with security over substantially all of the assets of Arrow. If Arrow becomes unable to pay its debt service charges or otherwise commits an event of default, such as bankruptcy, these lenders may foreclose on or sell Arrow's properties. The proceeds of any such sale would be applied to satisfy amounts owed to Arrow's lenders and other creditors and only the remainder, if any, would be available to Arrow shareholders. Arrow monitors and updates its cash projection models on a regular basis which assists in the timing decision of capital expenditures. Farm-outs of projects may be arranged if capital constraints are an issue or if the risk profile dictates that the Company wishes to hold a lesser working interest position. Equity, if available and if on reasonable terms, may be utilized to help fund Arrow's capital program.

### **Access to Capital**

Access to capital has become limited during these times of economic uncertainty. To the extent the external sources of capital become limited or unavailable. Arrow's ability to make the necessary capital investments to maintain or expand oil and gas reserves may be impaired.

### **Risks of Foreign Operations Generally**

Most of Arrow's oil and gas properties and operations are located in a foreign jurisdiction. As such, Arrow's operations may be adversely affected by changes in foreign government policies and legislation or social instability and other factors which are not within the control of Arrow, including, but not limited to, nationalization, expropriation of property without fair compensation, renegotiation or nullification of existing concessions and contracts, the imposition of specific drilling obligations and the development and abandonment of fields, changes in energy policies or the personnel administering them, changes in oil and natural gas pricing policies, the actions of national labour unions, currency fluctuations and devaluations, exchange controls, economic sanctions and royalty and tax increases and other risks arising out of foreign governmental sovereignty over the areas in which Arrow's operations are conducted, as well as risks of loss due to civil strife, acts of war, terrorism, guerrilla activities and insurrections. Arrow's operations may also be adversely affected by laws and policies of Colombia and Canada affecting foreign trade, taxation and investment. If Arrow's operations are disrupted and/or the economic integrity of its projects is threatened for unexpected reasons, its business may be harmed. Prolonged problems may threaten the commercial viability of its operations. In addition, there can be no assurance that contracts, licenses, license applications or other legal arrangements will not be adversely affected by changes in governments in foreign jurisdictions, the actions of government authorities or others, or the effectiveness and enforcement of such arrangements. In the event of a dispute arising in connection with Arrow's operations in Colombia, Arrow may be subject to the exclusive jurisdiction of foreign courts or may not be successful in subjecting foreign persons to the



jurisdictions of the courts of Canada or enforcing Canadian judgments in such other jurisdictions. Arrow may also be hindered or prevented from enforcing its rights with respect to a governmental instrumentality because of the doctrine of sovereign immunity. Accordingly, Arrow's exploration, development and production activities in Colombia could be substantially affected by factors beyond the Company's control, any of which could have a material adverse effect on Arrow. Acquiring interests and conducting exploration and development operations in foreign jurisdictions often require compliance with numerous and extensive procedures and formalities. These procedures and formalities may result in unexpected or lengthy delays in commencing important business activities. In some cases, failure to follow such formalities or obtain relevant evidence may call into question the validity of the entity or the actions taken. Management is unable to predict the effect of additional corporate and regulatory formalities which may be adopted in the future including whether any such laws or regulations would materially increase Arrow's cost of doing business or affect its operations in any area. Arrow believes that management's experience operating both in Colombia and in other international jurisdictions helps reduce these risks. In Colombia, the government has a long history of democracy and an established legal framework that, in Arrow's opinion, minimizes political risks.

### **Social risks**

The Company's activities are subject to social risks, including protests or blockades by groups located near some of the Company's operations. Despite the fact that the Company is committed to operating in a socially responsible manner, the Company may face opposition from local communities and non-governmental organizations with respect to its current and future projects, which could adversely affect the Company's business, results of operations and financial condition. No certainty can be given that the Company will be able to reach an agreement with the different communities or special interest groups, such as environmentalists and ethnic communities. Reaching such an agreement may also incur unanticipated costs. The Company could also be exposed to similar delays due to opposition from local communities in other countries where the Company carries out its activities.

### **Russia-Ukraine Conflict**

On February 24, 2022, Russian military forces launched a full-scale military invasion of Ukraine. In response, Ukrainian military personnel and civilians are actively resisting the invasion. Many countries throughout the world have provided aid to the Ukraine in the form of financial aid and in some cases military equipment and weapons to assist in their resistance to the Russian invasion. The North Atlantic Treaty Organization ("NATO") has also mobilized forces to NATO member countries that are close to the conflict as deterrence to further Russian aggression in the region. The outcome of the conflict is uncertain and is likely to have wide ranging consequences on the peace and stability of the region and the world economy. Certain countries including Canada and the United States, have imposed strict financial and trade sanctions against Russia and such sanctions may have far reaching effects on the global economy. In addition, the German government paused the certification process for the 1,200 km Nord Stream 2 natural gas pipeline that was built to carry natural gas from Russia to Germany. As Russia is a major exporter of oil and natural gas, the disruption of supplies of oil and natural gas from Russia could cause a significant worldwide supply shortage of oil and natural gas and significantly impact pricing of oil and gas worldwide. A lack of supply and high prices of oil and natural gas could have a significant adverse impact on the world economy. The long-term impacts of the conflict and the sanctions imposed on Russia remain uncertain.

### **Alternatives to/Changing Demand for Petroleum Products**

Fuel conservation measures, alternative fuel requirements, increasing consumer demand for alternatives to oil and natural gas, and technological advances in fuel economy and energy generation devices will reduce the demand for crude oil, natural gas and other liquid hydrocarbons. The Company cannot predict the impact of changing demand for oil and natural gas products and any major changes would have a material adverse effect on the Company's business, financial condition, results of operations and cash flow.

### **Exploration, Development and Production Risks**

Oil and natural gas exploration involves a high degree of risk, for which even a combination of experience, knowledge and careful evaluation may not be able to overcome. There is no assurance that expenditures made on future exploration by Arrow will result in new discoveries of oil or natural gas in commercial quantities. It is difficult to project the costs of



implementing an exploratory drilling program due to the inherent uncertainties of drilling in unknown formations, the costs associated with encountering various drilling conditions such as over-pressured zones, tools lost in the hole and changes in drilling plans and locations as a result of prior exploratory wells or additional seismic data and interpretations thereof.

The long-term commercial success of Arrow will depend on its ability to find, acquire, develop and commercially produce oil and natural gas reserves. No assurance can be given that Arrow will be able to locate satisfactory properties for acquisition or participation. Moreover, if such acquisitions or participations are identified, Arrow may determine that current markets, terms of acquisition and participation or pricing conditions make such acquisitions or participations uneconomic.

Future oil and gas exploration may involve unprofitable efforts, not only from dry wells, but from wells that are productive but do not produce sufficient net revenues to return a profit after drilling, operating and other costs. Completion of a well does not assure a profit on the investment or recovery of drilling, completion and operating costs. In addition, drilling hazards or environmental damage could greatly increase the cost of operations, and various field operating conditions may adversely affect the production from successful wells. These conditions include delays in obtaining governmental approvals or consents, shut-ins of connected wells resulting from extreme weather conditions, insufficient storage or transportation capacity or other geological and mechanical conditions. While diligent well supervision and effective maintenance operations can contribute to maximizing production rates over time, production delays and natural reservoir performance declines cannot be eliminated and can be expected to adversely affect revenue and cash flow levels to varying degrees.

In addition, oil and gas operations are subject to the risks of exploration, development and production of oil and natural gas properties, including encountering unexpected formations or pressures, premature declines of reservoirs, blow-outs, sour gas releases, fires and spills. Losses resulting from the occurrence of any of these risks could have a materially adverse effect on future results of operations, liquidity and financial condition. Arrow attempts to minimize exploration, development and production risks by utilizing a technical team with extensive experience to assure the highest probability of success in its drilling efforts. The collaboration of a team of seasoned veterans in the oil and gas business, each with a unique expertise in the various upstream to downstream technical disciplines of prospect generation to operations, provides the best assurance of competency, risk management and drilling success. A full cycle economic model is utilized to evaluate all hydrocarbon prospects. Detailed geological and geophysical techniques are regularly employed including 3D seismic, petrography, sedimentology, petrophysical log analysis and regional geological evaluation.

### **Governmental Regulation**

The oil and gas business is subject to regulation and intervention by governments in such matters as the awarding of exploration and production interests, the imposition of specific drilling obligations, environmental protection controls, control over the development and abandonment of fields (including restrictions on production) and possible expropriation or cancellation of contract rights, as well as with respect to prices, taxes, export quotas, royalties and the exportation of oil and natural gas. Such regulations may be changed from time to time in response to economic or political conditions. The implementation of new regulations or the modification of existing regulations affecting the oil and gas industry could reduce demand for oil and natural gas, increase Arrow's costs and have a material adverse effect on Arrow.

### **Global Pandemic**

Arrow's business, financial condition and results of operations could be materially and adversely affected by the outbreak of epidemics, pandemics and other public health crises in geographic areas in which we have operations, suppliers, customers or employees. The past COVID-19 pandemic, and actions that may be taken by governmental authorities in response thereto, has resulted, and may continue to result in, among other things: increased volatility in financial markets and foreign currency exchange rates; disruptions to global supply chains; labour shortages; reductions in trade volumes; temporary operational restrictions and restrictions on gatherings greater than a certain number of individuals, shelter-in-place declarations and quarantine orders, business closures and travel bans; an overall slowdown in the global economy; political and economic instability; and civil unrest. The COVID-19 pandemic has resulted in, and may continue to result in, a reduction in the demand for, and prices of, hydrocarbon and other commodities that are closely linked to Arrow's financial performance, and also increases the risk that storage for crude oil and refined petroleum products could reach capacity in



geographic locations in which we operate. A prolonged period of decreased demand for, and prices of, these commodities, and any applicable storage constraints, could also result in us voluntarily curtailing or shutting in production and a decrease in our refined product volumes and refinery utilization rates, which could adversely impact our business, financial condition and results of operations. Arrow is also subject to risks relating to the health and safety of our people, as well as the potential for a slowdown or temporary suspension of our operations in locations impacted by an outbreak, increased labour and fuel costs, and regulatory changes. Such a suspension in operations could also be mandated by governmental authorities in response to a pandemic. This could negatively impact Arrow's production volumes and revenues for a sustained period of time, which would adversely impact our business, financial condition and results of operations.

### **Credit Exposure**

Recent economic conditions have increased the risk that certain counterparties for the Company's oil and gas sales and our joint venture partners may fail to pay. Arrow mitigates these increased risks through diversification and a review process of the credit worthiness of our counterparties. Arrow's policy to mitigate credit risk associated with product sales is to maintain marketing relationships with large, established and reputable purchasers that are considered creditworthy. Arrow has not experienced any collection issues with its petroleum and natural gas marketers. Joint venture receivables are typically collected within two to three months of the joint venture bill being issued to the partner. Arrow attempts to mitigate the risk from joint venture receivables by obtaining partner approval of significant capital and operating expenditures prior to expenditure and in certain circumstances may require cash deposits in advance of incurring financial obligations on behalf of joint venture partners.

### **Health, Safety and Environment**

All phases of the oil and natural gas business present environmental risks and hazards and are subject to environmental regulation pursuant to a variety of federal, provincial/state and local laws and regulations. Environmental legislation provides for, among other things, restrictions and prohibitions on spills, releases or emissions of various substances produced in association with oil and natural gas operations. The legislation also requires that wells and facility sites be operated, maintained, abandoned and reclaimed to the satisfaction of applicable regulatory authorities. Compliance with such legislation can require significant expenditures and a breach of applicable environmental legislation may result in the imposition of fines and penalties, some of which may be material. Environmental legislation is evolving in a manner expected to result in stricter standards and enforcement, larger fines and liability and potentially increased capital expenditures and operating costs. The discharge of oil, natural gas or other pollutants into the air, soil or water may give rise to liabilities to governments and third parties and may require the Company to incur costs to remedy such discharge.

There are potential risks to the environment inherent in the business activities of the Company. Arrow has developed and implemented policies and procedures to mitigate health, safety and environment (HS&E) risks. Arrow mitigates HS&E risks by maintaining its wells and complying with all regulations. Regular field inspections are also carried out to ensure that all field personnel and third party contractors comply with all company and regulatory guidelines. An action plan has been developed to ensure inactive wells are suspended properly and abandoned in a timely fashion. The above noted policies and procedures are designed to protect and maintain the environment and to ensure that the employees, contractors, subcontractors and the public at large are kept safe at all times.

### **Foreign Exchange and Currency Risks**

The Company is exposed to foreign exchange and currency risk as a result of fluctuations in exchange rates between Colombian peso and the Canadian dollar. Most of the Corporation's revenues and funds from financing activities are expected to be received in reference to US dollar denominated prices while a portion of its operating, capital, and general and administrative costs are denominated in the Colombian peso and the Canadian dollar.

### **Widespread Pandemic**

The Company's foreign operations are located in areas relatively remote from local towns and villages and represent a concentration of personnel working and residing in close proximity to one another. Should an employee or visitor become infected with a serious illness that has the potential to spread rapidly, this could place Arrow's workforce at risk. The 2020



outbreak of the novel coronavirus (COVID-19) in China and other countries around the world is one example of such an illness. The Corporation takes every precaution to strictly follow industrial hygiene and occupational health guidelines. There can be no assurance that this virus or another infectious illness will not impact the Corporation's personnel and ultimately its operations.

### **Competition**

Arrow actively competes for reserve acquisitions, exploration leases, licenses and concessions and skilled industry personnel with a substantial number of other oil and gas companies, many of which have significantly greater financial and personnel resources than Arrow. Arrow's competitors include major integrated oil and natural gas companies and numerous other independent oil and natural gas companies and individual producers and operators.

Certain of Arrow's customers and potential customers are themselves exploring for oil and natural gas, and the results of such exploration efforts could affect Arrow's ability to sell or supply oil or gas to these customers in the future. Arrow's ability to successfully bid on and acquire additional property rights, to discover reserves, to participate in drilling opportunities and to identify and enter into commercial arrangements with customers will be dependent upon developing and maintaining close working relationships with its future industry partners and joint operators and its ability to select and evaluate suitable properties and to consummate transactions in a highly competitive environment.

### **Social License to Operate**

Heightened public monitoring and regulation of hydrocarbon resource producers, refiners, distributors and commercial/retail sellers, especially where their activities carry the potential for having negative impacts on communities and the environment, involves varying degrees of risk to the Company's reputation, relations with landowners and regulators, and in extreme cases even the ability to operate. Arrow maintains an active website that complies with Exchange requirements for timely disclosure and together with its press releases and other SEDAR filings, is the primary means of communicating to the general public. While media attention and public perception remains largely beyond the control of Arrow's executive, employees, contractors and directors, the Company makes every effort in its corporate and field operations to engage all stakeholders in a respectful and transparent manner.

### **INTERNAL CONTROLS OVER FINANCIAL REPORTING**

The CEO and CFO, along with participation from other members of management, are responsible for establishing and maintaining adequate Internal Control over Financial Reporting ("ICFR") to provide reasonable assurance regarding the reliability of financial statements prepared in accordance with IFRS. The Company's CEO and CFO, with support of management have assessed the design and operating effectiveness of the Corporation's ICFR as at December 31, 2022 based on criteria described in "Internal Control - Integrated Framework" issued in 2013 by the Committee of Sponsoring Organization of the Treadway Commission. Based on this assessment, it was concluded that the design and operation of the Corporation's ICFR are effective as at December 31, 2022. During the three months ended December 31, 2022, there has been no change in the Corporation's ICFR that has materially affected, or is reasonably likely to materially affect, the Corporation's ICFR.