

# **ARROW EXPLORATION CORP.**

**MANAGEMENT'S DISCUSSION AND ANALYSIS  
TWELVE MONTHS ENDED DECEMBER 31, 2018**





## MANAGEMENT'S DISCUSSION AND ANALYSIS

Arrow Exploration Corp. ("Arrow" or "the Company") (formerly Front Range Resources Ltd. ("Front Range")) is a public junior oil and gas company engaged in the acquisition, exploration and development of oil and gas properties in Colombia and in Western Canada. The Company's shares trade on the TSX Venture 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) on September 28, 2018. Arrow Exploration Ltd. was incorporated under the *Business Corporations Act* (Alberta) on December 12, 2016 as 2010461 Alberta Ltd. and on January 24, 2018, 2010461 Alberta Ltd. changed its name to Arrow Exploration Ltd. by way of a certificate of amendment. Arrow Exploration Ltd. and Front Range's then wholly-owned subsidiary, 2118295 Alberta Ltd., were amalgamated on September 28, 2018 pursuant to the arrangement agreement to form Arrow Holdings Ltd. ("AHL"), a wholly-owned subsidiary of the Company.

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. 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 the Tapir Association Contract from Samaria Exploration & Production S.A. ("Samaria"). On September 27, 2018, Arrow Exploration Ltd closed the agreement with Samaria.

For accounting and presentation purposes, this Management Discussion and Analysis reflects the results of operations of Arrow Exploration Ltd., the accounting acquirer, with the exception of the number of shares which were adjusted to reflect the legal capital of the Company.

The head office of Arrow is located at Suite 920, 150 – 9<sup>th</sup> Avenue SW, Calgary, Alberta, Canada, T2P 3H9 and the registered office is located at Suite 3400, 350 – 7<sup>th</sup> Avenue SW, Calgary, Alberta, Canada, T2P 3N9.

### Advisories

The following management's discussion and analysis ("MD&A") is dated April 30, 2019 and is the Company's explanation of its financial performance for the period covered by the financial statements along with an analysis of the Company's financial position. Comments relate to and should be read in conjunction with the unaudited interim condensed consolidated financial statements of the Company for the twelve months December 31, 2018 (the "financial statements"). The 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, except per share amounts or as otherwise noted. Additional information for the Company, including the Annual Information Form, may be found on SEDAR at [www.sedar.com](http://www.sedar.com).

**Forward-Looking Statements** – *Certain information set forth in this document contain forward-looking statements. All statements other than historical fact contained herein are forward-looking statements, including, without limitation, statements regarding the future financial position, business strategy, production rates, and plans and objectives of or involving the Company. By their nature, forward-looking statements are subject to numerous risks and uncertainties, some of which are beyond the Company's control, including the impact of general economic conditions, industry conditions, governmental regulation, volatility of commodity prices, currency fluctuations, the uncertainty of reserve estimates, environmental risks, competition from other industry participants, the lack of availability of qualified personnel or management, stock market volatility and the ability to access sufficient capital from internal and external sources. In particular with respect to forward-looking comments in this MD&A, readers are cautioned that there can be no assurance that the Company will meet its commitments under exploration and production contracts in Colombia, or complete its planned capital projects on schedule, or that petroleum production will result from such capital projects, or that*



*hydrocarbon-based royalties assessed will remain consistent or that royalties will continue to be applied on a sliding-scale basis as production increases on any one block. The Company's actual results, performance or achievement could differ materially from those expressed in, or implied by, these forward-looking statements and, accordingly, no assurance can be given that any of the events anticipated by the forward-looking statements will transpire or occur, or if any of them do so, what benefits the Company will derive therefrom.*

*In addition to historical information, this MD&A contains forward-looking statements that are generally identifiable as any statements that express, or involve discussions as to, expectations, beliefs, plans, objectives, assumptions or future events of performance (often, but not always, through the use of words or phrases such as "will likely result," "expected," "is anticipated," "believes," "estimated," "intends," "plans," "projection" and "outlook"). These statements are not historical facts and may be forward-looking and may involve estimates, assumptions and uncertainties which could cause actual results or outcomes to differ materially from those expressed in such forward-looking statements. Actual results achieved during the forecast period will vary from the information provided herein as a result of numerous known and unknown risks and uncertainties and other factors. Such factors include, but are not limited to: general economic, market and business conditions; fluctuations in oil and gas prices; the results of exploration and development drilling and related activities; changes in fiscal and royalty terms; fluctuations in foreign currency exchange rates; the uncertainty of reserve estimates; changes in environmental and other regulations; changes in partners plans; counterparty risk; and risks associated with oil and gas operations, many of which are beyond the control of the Company. Accordingly, there is no representation by the Company that actual results achieved during the forecast period will be the same in whole or in part as those forecasted. Except to the extent required by law, the Company assumes no obligation to publicly update or revise any forward-looking statements made in this MD&A or otherwise, whether as a result of new information, future events or otherwise. All subsequent forward-looking statements, whether written or oral, attributable to the Company or persons acting on the Company's behalf, are qualified in their entirety by these cautionary statements.*

*Readers are further cautioned not to place undue reliance on any forward-looking information or statements.*

**Non-IFRS Measures** – *Two of the benchmarks the Corporation uses to evaluate its performance are funds from operations and EBITDA, which are measures not defined in IFRS. Funds from operations represents cash flow provided by operating activities before settlement of decommissioning obligations and changes in non-cash working capital. EBITDA is calculated on a rolling 12-month basis and is defined as net income (loss) and comprehensive income (loss) adjusted for interest, income taxes, depreciation, depletion, amortization and other similar non-recurring or non-cash charges. The Corporation considers these measures as key measures to demonstrate its ability to generate the cash flow necessary to fund future growth through capital investment, pay dividend and to repay its debt. These measures should not be considered as an alternative to, or more meaningful than, cash provided by operating activities or net income (loss) and comprehensive income (loss) as determined in accordance with IFRS as an indicator of the Corporation's performance. The Corporation's determination of these measures may not be comparable to that reported by other companies.*

*The Corporation 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 (loss) and comprehensive income (loss) per share.*

*Working capital and operating netback 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 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 6,000 cubic feet of natural gas to one barrel of oil 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

Financial	Three months ended, December 31			Year ended, December 31		
	2018	2017	Change	2018	2017	Change
Total natural gas and crude oil revenues, net of royalties	\$ 5,911,425	-	n/a	\$ 6,077,423	-	n/a
Funds from (used in) from operations <sup>1)</sup>	922,280	(2,887)	n/a	(971,986)	(3,987)	n/a
Per share – basic (\$) and diluted (\$)	0.01	(0.00)	n/a	(0.01)	(0.00)	n/a
Net income (loss)	1,242,936	(3,078)	n/a	(665,123)	(4,228)	n/a
Per share – basic (\$) and diluted (\$)	\$0.02	(\$0.00)	n/a	(\$0.01)	(\$0.00)	n/a
EBITDA <sup>(1)</sup>	1,170,678	(2,887)	n/a	(719,478)	(3,987)	n/a
Weighted average shares outstanding – basic and diluted	68,674,602	61,591,065	11%	64,056,032	61,591,065	4%
Common shares end of year	68,674,602	61,591,065	11%	68,674,602	61,591,065	11%
Capital expenditures	7,007,580	-	n/a	7,007,580	-	n/a
Net proceeds on disposal	4,875,000	-	n/a	4,875,000	-	n/a
Cash and cash equivalents				\$1,994,233	7,966	n/a
Restricted cash				3,154,839	-	n/a
Working capital				(8,558,782)	3,598	n/a
Total current debt				17,157,942	4,368	n/a
Total assets				76,962,315	7,966	n/a
<b>Operating</b>						
<b>Natural gas and crude oil production, before royalties</b>						
Natural gas (Mcf/d)	733	-		734	-	
Natural gas liquids (bbl/d)	7	-		7	-	
Crude oil (bbl/d)	1,553	-		1,547	-	
<b>Total (boepd)</b>	<b>1,682</b>	<b>-</b>		<b>1,676</b>	<b>-</b>	
<b>Operating netbacks (\$/boe) <sup>(1)</sup></b>						
Natural gas (\$/Mcf)	(\$1.97)	-		(\$ 1.92)	-	
Crude oil (\$/bbl)	\$19.15	-		\$19.22	-	
<b>Total (\$/boe)</b>	<b>\$16.88</b>	<b>-</b>		<b>\$16.96</b>	<b>-</b>	

(1) Non-IFRS measures – see “Non-IFRS Measures” section within MD&A.



### Annual 2018 Reserve Highlights

- 4.97 MMboe of Proved Reserves
- 10.57 MMboe of Proved plus Probable Reserves
- Proved Reserves estimated net present value before income taxes of US \$56,138,000 calculated at a 10% discount rate
- Proved plus Probable Reserves estimated net present value before income taxes of US \$114,018,000 calculated at a 10% discount rate
- Reserve Life Index of 8.1 for Proved Reserves and 17.2 for Proved plus Probable Reserves based on average fourth quarter 2018 corporate production of 1,683 boe/d

### Three Months Ended December 31, 2018 Financial and Operational Highlights

- For the three months ended December 31, 2018, Arrow recorded \$5,909,289 in revenues (net of royalties on crude oil sales of 134,412 barrels, 644 barrels of NGL's and 67,472 Mcf of natural gas sales)
- Funds from operations of \$922,280 compared with \$2,887 for the same period in 2017
- EBITDA for the three months ended December 31, 2018 was \$1,170,678
- The Company recorded net income of \$1,242,936 for the three months ended December 31, 2018. Net CAPEX for the three months ended December 31, 2018 was \$7,007,580 attributable mainly to drilling the Danes-1 well on the Llanos 23 Block. Danes was a successful exploration well, which was a commitment well required to be drilled by November 18, 2018.

### Results of Operations

For the three months ended December 31, 2018, the Company's average production was 1,682 boe/d which consisted of crude oil production in Colombia at 1,553 bbl/d and natural gas production of 733 Mcf/d from the Company's Canadian properties.

During the three months ended December 31, 2018, the Company drilled the Danes-1 exploration well, on the LLA 23 block. Danes-1 was spud on October 25, 2018 and reached total depth of 11,276 feet measured depth within the Ubaque Formation. The well was perforated and tested in the Gacheta D2 Sand which was one of three prospective zones identified by logs. After stabilizing the well conditions at 19:00 hours on December 3, 2018 using a 64/64" choke, a 24-hour test was performed where the well averaged 939 bbl/d with negligible water cut (less than 0.1%) using an Electric Submersible Pump (ESP) operating at a frequency of 30 hz and was brought up to a peak flow rate of 1,186 bbl/d (water cut less than 0.1%) at an ESP frequency of 34.5 hz. Danes-1 encountered 43 feet of net oil pay in three reservoirs and was placed on production December 7, 2018. In addition to the drilling of Danes-1, Arrow commenced a workover program on its Mono Arana and LLA 23 properties near the end of the quarter.

Effective December 1, 2018, Arrow sold a partial working interest along with operatorship in its VMM2 (Mono Arana) property for gross proceeds of \$5 million with the Company retaining a 20% interest in the property.



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

	Three months ended December 31,			Year ended December 31,		
	2018	2017	Change	2018 <sup>(1)</sup>	2017	Change
<b>Natural Gas (Mcf/d)</b>						
Natural gas production	733	-	n/a	734	-	n/a
Natural gas sales	733	-	n/a	734	-	n/a
<b>Realized Contractual Natural Gas Sales</b>	<b>733</b>	-	n/a	<b>734</b>	-	n/a
<b>Crude Oil (bbl/d)</b>						
Crude oil production	1,553	-	n/a	1,547	-	n/a
Inventory movements and other	(92)	-	n/a	(90)	-	n/a
<b>Crude Oil Sales</b>	<b>1,461</b>	-	n/a	<b>1,457</b>	-	n/a
<b>Corporate</b>						
Natural gas production (boe/d)	122	-	n/a	122	-	n/a
Natural Gas Liquids (bbl/d)	7	-	n/a	7	-	n/a
Crude oil production (bbl/d)	1,553	-	n/a	1,547	-	n/a
Total production (boe/d)	1,682	-	n/a	1,676	-	n/a
Inventory movements and other (boe/d)	(92)	-	n/a	(90)	-	n/a
Total Corporate Sales (boe/d)	1,590	-	n/a	1,586	-	n/a

(1) Year ended December 31, 2018 calculated from September 28, 2018 to December 31, 2018

The quarter ending December 31, 2018 represented Arrow's first full quarter of operations following the acquisition of its Colombian and Canadian properties. The majority of production was attributed to Colombia where the Company operates two properties: Llanos 23 and Santa Isabel, and has working interest in two non-operated properties, VMM2 and Capella.

In Canada, the Company has four non-operated properties located in the province of Alberta at Fir, Pepper, Harley and Wapiti producing 733 Mcf/d.



## Natural Gas and Crude Oil Revenues

	Three months ended December 31,			Year ended December 31,		
	2018	2017	Change	2018 <sup>(2)</sup>	2017	Change
<b>Natural Gas</b>						
Natural gas revenues	\$ 88,417	\$ -	n/a	\$ 120,988	\$ -	n/a
NGL revenues	28,341	-	n/a	1,232	-	n/a
Royalties	(4,064)	-	n/a	(5,934)	-	n/a
<b>Revenues, net of royalties</b>	<b>112,693</b>	<b>-</b>	<b>n/a</b>	<b>116,286</b>	<b>-</b>	<b>n/a</b>
<b>Crude Oil</b>						
Crude oil revenues	6,499,829	-	n/a	6,669,791	-	n/a
Royalties	(704,570)	-	n/a	(719,298)	-	n/a
<b>Revenues, net of royalties</b>	<b>5,796,596</b>	<b>-</b>	<b>n/a</b>	<b>5,950,259</b>	<b>-</b>	<b>n/a</b>
<b>Corporate</b>						
Natural gas revenues	88,417	-	n/a	120,988	-	n/a
NGL revenues	28,341	-	n/a	1,232	-	n/a
Crude oil revenues	6,500,166	-	n/a	6,669,558	-	n/a
Total revenues	6,616,923	-	n/a	6,791,778	-	n/a
Royalties	(708,634)	-	n/a	(725,232)	-	n/a
Natural gas and crude oil revenues, net of royalties, as reported	5,908,289	-	n/a	6,066,546	-	n/a

(1) Year ended December 31, 2018 calculated from September 28, 2018 to December 31, 2018

Revenue for the quarter ending December 31, 2018 was \$5.9 million net of royalties. The majority of production is crude oil and the Company receives Brent referenced pricing.

## Average Benchmark and Realized Prices <sup>(2)</sup>

	Three months ended December 31,			Year ended December 31,		
	2018	2017	Change	2018 <sup>(2)</sup>	2017	Change
<b>Benchmark Prices</b>						
AECO (\$/Mcf)	\$ 1.21	\$ 1.23	(2%)	\$ 1.18	\$ 1.68	(30%)
Brent (\$/bbl)	\$ 67.52	\$ 61.52	10%	\$ 71.13	\$ 54.42	31%
West Texas Intermediate (\$/bbl)	\$ 58.79	\$ 55.46	6%	\$ 64.85	\$ 50.92	27%
<b>Realized Prices</b>						
Natural gas, net of transportation (\$/Mcf)	\$ 1.31	\$ -	n/a	\$ 1.33	\$ -	n/a
Natural gas liquids (\$/bbl)	\$ 44.01	\$ -	n/a	44.67	\$ -	n/a
Crude oil, net of transportation (\$/bbl)	\$ 48.36	\$ -	n/a	\$ 48.19	\$ -	n/a
Corporate average, net of transportation (\$/boe) <sup>(1)</sup>	\$ 45.23	\$ -	n/a	\$ 45.08	\$ -	n/a

(1) Non-IFRS measure

(2) Year ended December 31, 2018 calculated from September 28, 2018 to December 31, 2018



The Company realized a price of \$45.23 per boe during the quarter as world oil prices declined during Q4, 2018. In Canada, natural gas prices rebounded from cyclical lows, however, remained at relatively depressed levels.

## Operating Expenses

	Three months ended December 31,			Year ended December 31,		
	2018	2017	Change	2018 <sup>(1)</sup>	2017	Change
Natural gas & NGL's	\$ 217,492	\$ -	n/a	\$ 220,409	\$ -	n/a
Crude oil	3,222,939	-	n/a	3,290,348	-	n/a
<b>Total operating expenses</b>	<b>\$ 3,440,431</b>	<b>\$ -</b>	<b>n/a</b>	<b>\$ 3,510,757</b>	<b>\$ -</b>	<b>n/a</b>
Natural gas (\$/Mcf)	\$ 3.22	\$ -	n/a	\$ 3.27	\$ -	n/a
Crude oil (\$/bbl)	\$ 23.98	\$ -	n/a	\$ 20.80	\$ -	n/a
<b>Corporate (\$/boe)<sup>(1)</sup></b>	<b>\$ 22.23</b>	<b>\$ -</b>	<b>n/a</b>	<b>\$ 3.74</b>	<b>\$ -</b>	<b>n/a</b>

(1) Year ended December 31, 2018 calculated from September 28, 2018 to December 31, 2018

During the quarter, Arrow recorded \$3.4 million in operating expenses which were higher than anticipated and reflected additional costs associated with the transition services agreement with Canacol as the Company established its own Colombian field operations. Included in operating costs were \$120,000 in transition services costs. In Canada, the Company was unexpectedly charged \$134,000 in backdated processing, gas gathering and compression fees by the operator.

## Operating Netbacks

\$/Mcf	Three months ended December 31,			Year ended December 31,		
	2018	2017	Change	2018 <sup>(2)</sup>	2017	Change
<b>Natural Gas</b>						
Revenue, net of transportation expense	\$ 1.31	\$ -	n/a	1.33	\$ -	n/a
Royalties	(0.06)	-	n/a	(0.9)	-	n/a
Operating expenses	(3.22)	-	n/a	(3.16)	-	n/a
<b>Operating netback<sup>(1)</sup></b>	<b>\$ (1.97)</b>	<b>\$ -</b>	<b>n/a</b>	<b>\$ (1.92)</b>	<b>\$ -</b>	<b>n/a</b>

\$/bbl	Three months ended December 31,			Year ended December 31,		
	2018	2017	Change	2018 <sup>(2)</sup>	2017	Change
<b>Crude oil</b>						
Revenue, net of transportation expense	\$ 48.36	\$ -	n/a	\$ 48.19	\$ -	n/a
Royalties	(5.23)	-	n/a	(5.20)	-	n/a
Operating expenses	(23.98)	-	n/a	(23.77)	-	n/a
<b>Operating netback<sup>(1)</sup></b>	<b>\$ 19.15</b>	<b>\$ -</b>	<b>n/a</b>	<b>\$ 19.22</b>	<b>\$ -</b>	<b>n/a</b>

\$/boe	Three months ended December 31,			Year ended December 31,		
	2018	2017	Change	2018 <sup>(2)</sup>	2017	Change
<b>Corporate</b>						
Revenue, net of transportation expense	\$ 45.23	\$ -	n/a	\$ 45.08	\$ -	n/a
Royalties	(4.83)	-	n/a	(4.82)	-	n/a
Operating expenses	(23.52)	-	n/a	(23.30)	-	n/a
<b>Operating netback<sup>(1)</sup></b>	<b>\$ 16.88</b>	<b>\$ -</b>	<b>n/a</b>	<b>\$ 16.96</b>	<b>\$ -</b>	<b>n/a</b>



- (1) Non-IFRS measure  
 (2) Year ended December 31, 2018 calculated from September 28, 2018 to December 31, 2018

### General and Administrative Expenses and Transaction Costs

	Three months ended December 31,			Year ended December 31,		
	2018	2017		2018	2017	
General & administrative expenses	\$ 2,996,358	\$ -		\$ 3,832,430	\$ 4,228	
Transaction Costs	-	-		1,073,656	-	
<b>Total</b>	<b>\$ 2,996,358</b>	<b>\$ -</b>		<b>\$ 4,906,086</b>	<b>\$ 4,228</b>	

Prior to 2018, the Company did not have any material operational activity.

For the three months ended December 31, 2018, General and administrative (“G&A”) expenses saw a substantial increase from the same period in the year prior where there was no material operational activity as the Company commenced operations following the acquisitions of Carrao Energy S.A. (“Carrao”) from Canacol, the 50% interest in the Tapir Association Contract (“Tapir assets”) from Samaria and completion of the reverse takeover of Front Range Resources Ltd. (“Front Range”) on September 28, 2018. Expenditures included the establishment of a Bogota office (staffing, office rent, ERP systems, etc.) and the additional cost of the transition services provided by Canacol to ensure continuity of operations. In Canada, the Company established a Corporate office in Calgary, incurring costs for management salaries, information systems and professional services such as legal fees of \$324,000, reserve evaluator fees of \$ 206,000 and audit fees of \$123,000.

G&A expenses for the twelve months ended December 31, 2018 increased by \$3.8 million due the establishment of Colombian and Canadian operations on September 28, 2018 as described above along with costs associated with consulting fees for due diligence, legal fees and other transactional costs (primarily legal costs) related to the Front Range reverse takeover, Carrao and Tapir Interest acquisitions.

### Finance Expense

	Three months ended December 31,			Year ended December 31,		
	2018	2017	Change	2018	2017	Change
Financing expense paid or payable	\$ 248,398	\$ -	n/a	\$ 252,508	\$ -	n/a
Non-cash financing costs	86,621	-	n/a	86,621	-	n/a
<b>Net finance expense</b>	<b>\$ 335,019</b>	<b>\$ -</b>	<b>n/a</b>	<b>\$ 339,129</b>	<b>\$ -</b>	<b>n/a</b>

The finance expense paid or payable represents interest on the \$5 million promissory note due to Canacol., as partial payment for the acquisition of Carrao which bears interest at 15% per annum. In addition, financing expense includes fees and interest associated with financing 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 period. The amount of this expense will fluctuate commensurate with the asset retirement obligation as new wells are drilled or properties are acquired or disposed.



## Commodity Risk Management Contracts

During the three and twelve months ended December 31, 2018, the Company had not entered into any commodity risk management contracts but may enter into such contracts going forward to reduce commodity risk and protect cashflow.

## Stock-Based Compensation Expense

	Three months ended December 31,			Year ended December 31,		
	2018	2017	Change	2018	2017	Change
Stock-based compensation expense	\$ 256,987	\$ -	n/a	\$ 256,987	\$ -	n/a
Stock-based compensation expense	\$ 256,987	\$ -	n/a	\$ 256,987	\$ -	n/a

During the three months ended December 31, 2018, the Company granted 6,350,000 options to certain directors, officers and management of Arrow to purchase shares in the Company at an exercise price of \$CAD1.15 per share. The options carry a term of 10 years and vest one third at each of the first, second and third anniversaries from date of issuance (October 22, 2018). The weighted average fair market value per option granted in 2018 was approximately \$CAD0.45 and was estimated using the Black-Scholes option pricing model with the following assumptions: dividend yield – nil, expected volatility 65%, risk free rate – 2.0%, expected life - 10 years, estimated forfeiture rate – 5% and utilizing the graded option method.

## Depletion and Depreciation Expense

	Three months ended December 31,			Year ended December 31,		
	2018	2017	Change	2018	2017	Change
Depletion and depreciation expense	\$ 2,030,327	\$ -	n/a	\$ 2,044,120	\$ -	n/a

Depletion and depreciation expense in the three and twelve months ended December 31, 2018 totalled \$2,030,327 and \$2,044,120 respectively compared with nil in the same periods last year. The incurrence of this expense is the result of the acquisition of Carrao and the reverse takeover of Front Range. The Company uses the unit of production method and proved plus probable reserves to calculate depletion expense.

## Income Tax

	Three months ended December 31,		Year ended December 31,	
	2018	2017	2018	2017
Current income tax expense	\$ -	\$ -	\$ -	\$ -
Deferred income tax expense	75,000	-	75,000	-
<b>Income tax expense</b>	<b>\$ 75,000</b>	<b>\$ -</b>	<b>\$ 75,000</b>	<b>\$ -</b>

At December 31, 2018, the carrying value of the deferred income tax liability was \$2,026,000, using the asset and liability method of accounting for income taxes related to the operations of Carrao. The Company recognizes deferred income tax assets to the extent it believes that these assets will more likely than not be realized. The Company offsets the deferred income tax assets against the deferred income tax liability when it has the legal right to do so. In making this determination, the Company considers all available positive and negative evidence, including the reversal of all existing temporary differences, projected future taxable income, tax-planning strategies, and results of recent operations. As a result, the Company determined it was not appropriate to recognize a deferred tax asset with respect to its Canadian operations.

Presently, the Company does not expect to pay corporate taxes into the foreseeable future based on existing tax pools, planned capital activities and current forecasts of taxable income. However, the current tax horizon will ultimately depend



on several factors including commodity prices, future production, corporate expenses, and both the type and amount of capital expenditures incurred in future reporting periods.

## LIQUIDITY AND CAPITAL RESOURCES

### Capital Management

The Company’s policy is to maintain a strong capital base in order 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 working capital, defined as current assets less current liabilities, excluding non-cash items. 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.

The Company monitors leverage and adjusts its capital structure based on its net debt level. Net debt is defined as the principal amount of its outstanding debt, less working capital items. In order to facilitate the management of its net debt, the Company prepares annual budgets, which are updated as necessary depending on varying factors including current and forecast crude oil prices, changes in capital structure, execution of the Company’s business plan and general industry conditions. The annual budget is approved by the Board of Directors and updates are prepared and reviewed as required.

During the three months ended December 31, 2018, the Company entered into an agreement to sell a partial interest in the VMM2 block in Colombia for \$5 million along with transfer of operatorship. The funds were received in December 2018 and used to fund working capital.

**At December 31, 2018 the Company’s net debt was calculated as follows:**

	December 31, 2018
Current assets	\$ 8,599,160
Accounts payable and accrued liabilities	12,157,942
Promissory Note – principal	5,000,000
<b>Net debt</b>	<b>\$ 8,558,782</b>

### Credit Facilities and Debt

The Company currently has \$5 million in outstanding debt in the form of a Promissory Note payable to Canacol.

On April 29, 2019, Arrow and Canacol entered into an Amended and Restated Promissory Note (the “Amended Note”) to revise the terms of the original \$5 million promissory note issued upon Arrow’s acquisition of Carrao Energy S.A. from Canacol in September 2018. The amendments provide for repayment of the obligation commencing on July 1, 2019 at \$500,000 per month until payout. The Amended Note, which still bears interest at 15%, also contains an accelerated payment feature whereby Canacol will receive 50% of Arrow’s working interest cash flow from the Rio Cravo Este well, calculated on a two-month trailing basis with immediate effect, up to a maximum of \$500,000, such that the monthly payment to Canacol will not exceed \$1 million. The balance of the obligation is also accelerated under the Amended Note in the event Arrow closes a credit facility or other financing structure, or closes a sale of assets pursuant to a definitive agreement entered into after April 29, 2019, in either case for net proceeds to Arrow in a minimum amount of \$5 million.

#### Credit Facility

As previously disclosed, Arrow has been working to secure a credit facility since closing the reverse takeover. Arrow continues to engage in discussions with various potential credit facility providers and is evaluating alternative debt solutions in the event the Company is unable to close the credit facility as originally contemplated.



### Letters of Credit

At December 31, 2018, the Company had obligations under Letters of Credit (LC's) outstanding totaling \$21.5 million to guarantee work commitments on exploration blocks and other contractual commitments. Of the total, \$19.9 million has been guaranteed by Canacol. In the event Canacol was to withdraw its support for any of these guarantees, Arrow could be in default of its obligations with the ANH on that block, which could result in losing its ownership of the rights to that block. These letters of credit are in the process of being transitioned to Arrow from Canacol.

### Current Outstanding Letters of Credit

Contract	Beneficiary	Issuer	Type	Amount (US \$)	Due Date
LLA - 23	ANH	CNE O&G	Abandonment	\$6,076,812	2019-06-30
	ANH	CNE O&G + Carrao Energy SA Suc Col	Abandonment	\$5,424,125	2019-06-30
	ANH	CNE O&G	Compliance	\$3,500,000	2019-05-18
	ANH	CNE O&G	Compliance	\$750,000	2019-05-18
VMM - 2	ANH	Carrao Energy SA Suc Col	Abandonment	\$285,431	2019-05-23
	ANH	Canacol	Compliance	\$434,850	2019-06-06
SANTA ISABEL	ANH	Carrao Energy SA Suc Col	Abandonment	\$482,451	2020-04-14
	ANH	CNE + Carrao Energy SA Suc Col	Financial Capacity	\$1,672,162	2019-06-30
CORE - 39	ANH	Canacol	Compliance	\$2,400,000	2019-09-20
OMBU	ANH	Carrao Energy SA Suc Col	Financial Capacity	\$436,300	2020-04-14
TAPIR	ECOPETROL	Samaria Llanos Exploration Suc Col + Petrolco	Abandonment	\$52,898	2019-12-26
<b>Total</b>				<b>\$21,515,029</b>	

Subsequent to year-end, the Company sold its remaining interest in the VMM2 block and received a reduction in the compliance LC's on the LLA-23 block. As a result, the Company will see a reduction in LC's of \$2,275,000 relating to the LLA-23 Block.

### Share Capital

At December 31, 2018, the Company had 68,674,602 common shares, 6,350,000 stock options, 634,638 Agents options and 18,957,398 warrants outstanding.

### Subsequent Events

On April 25, 2019, the Company entered into Definitive Agreements to sell two non-core interests in Colombia for an aggregate sale price of \$5 million US, subject to adjustments. The first sale, for \$3.5 million, subject to adjustments, closed on April 29, 2019, with the formal legal transfer of ownership of working interests subject to ultimate approval by the Agencia Nacional de Hidrocarburos (ANH). The second transaction, for \$1.5mm, subject to adjustments, is anticipated to close this fiscal quarter, subject to satisfaction of certain conditions precedent. Combined production for the disposed assets averaged approximately 75 bbl/d for the first quarter of 2019 which equates to a sale metric of \$66,000 per flowing barrel. Transaction proceeds, in combination with cash set aside for drilling (restricted cash on the balance sheet), are expected to fully fund drilling the Rio Cravo Este-1 exploration well. Furthermore, these transactions are expected to eliminate \$6.95 million from Arrow's future spending commitments.



## 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, 2018:

	Less than 1 year	1-3 years	Thereafter	Total
Promissory Note	\$ 3,000,000	\$ 2,000,000	\$ -	\$ 5,000,000
Exploration and production contracts	6,500,000	40,500,000	-	47,000,000
Office leases	149,759	154,041	171,871	475,671
Equipment leases	26,950	47,375	-	74,325
Trade and other payables				
	\$ 6,676,709	\$ 40,701,416	\$ 171,871	\$ 47,549,996

### 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, 2018 of \$47.0 million. Commitments less than one year relate to the commitment to earn a 50% interest in the Tapir Block. This commitment is expected to be fulfilled by May 2019 with the drilling of the Rio Cravo Este well. Additionally, with the sale of non-core assets as disclosed in subsequent events, the Company expects to transfer to the purchaser another \$6.95 million in commitments that were scheduled for 2020. This will result in a reduction of \$13.45 million in commitments during 2019. The remaining commitments are expected to be satisfied by means of seismic work, exploration drilling and farm-outs.

### Oleoducto Bicentenario de Colombia ("OBC") Pipeline

The Company holds a private agreement that entitles it to a 0.5% interest in OBC, which owns a pipeline system that intends to link Llanos basin oil production to the Cano Limon oil pipeline system in Colombia. This agreement was part of Arrow's acquisition of Carrao, and official transfer of ownership was to be effected on finalization of an arbitration hearing between Canacol and OBC. The hearing was held on March 27, 2019 and discussions are currently being held with Canacol on their proposed response to the hearing. Upon transfer of ownership and under the terms of the OBC agreement, Arrow may be required to provide financial support or guarantees for its proportionate equity interest in any future debt financings undertaken by OBC. The take or pay obligations, under the agreement between Canacol and OBC, were terminated by Canacol in July 2018 under force majeure and remain suspended as the pipeline has not been operational for greater than 6 months.

## SUMMARY OF QUARTERLY RESULTS

	2018				2017			
	Q4	Q3	Q2	Q1	Q4	Q3	Q2	Q1
<b>Petroleum and natural gas sales, net of royalties</b>	<b>5,911,425</b>	<b>158,257</b>	-	-	-	-	-	-
Net income (loss)	1,242,936	(1,265,672)	(359,560)	(312,107)	(4,193)	(50)	(75)	(50)
Loss per share – basic and diluted	(0.00)	(0.02)	-	-	-	-	-	-
Working capital (deficit)	(8,558,782)	(4,546,878)	(671,359)	(308,534)	(3,598)	(545)	(495)	(420)
Total assets	76,962,315	76,448,190	26,131	20,542	4,347	-	-	-
Net capital expenditures	7,007,580	62,624,775	-	-	-	-	-	-
Average daily production (boe/d)	1,682	1,481	-	-	-	-	-	-

Until the first quarter of 2018, the Company had no material operational activities. In the first quarter of 2018, a management team was assembled to commence due diligence on the Carrao and Tapir assets and review financing options which resulted in the previously mentioned reverse takeover of Front Range. As a result of closing the acquisitions and



financing transactions on September 28, 2018, Arrow recorded two days of oil and gas operations in the third quarter of 2018 and the fourth quarter of 2018 represented the first full quarter of operations. The three months ended December 31, 2018, represents the first full quarter of operations in Canada and Colombia.

## OUTSTANDING SHARE DATA

At December 31, 2019, the Company had the following securities issued and outstanding:

	Number	Exercise Price	Expiry Date
Common shares	68,674,602	n/a	n/a
Stock options	6,350,000	\$CAD 1.15	October 22, 2028
Warrants	18,957,398 <sup>(2)</sup>	\$US 1.30	September 24, 2020 <sup>(2)</sup>
Agent's options <sup>(1)</sup>	634,638	\$US 1.00	September 27, 2019

(1.) On September 27, 2018, 634,638 agents options were granted to the agent upon closing of a private placement financing of subscription receipts that was completed in conjunction with the reverse takeover of Front Range, the acquisition of Carrao and the purchase of the Tapir Association contract. Each agents option is exercisable for a period of 12 months at \$1.00 into one common share and one share purchase warrant with each warrant exercisable at \$1.30 for two years from the date of issuance.

(2.) 18,327,398 of these warrants were issued upon the September 27, 2018 conversion of the subscription receipts subscribed for under the private placement financing described in note (1) above, and have an expiry date of September 27, 2020. 630,000 warrants have an expiry date of September 24, 2020 and remain outstanding following the September 24, 2018 closing of a private placement financing of units completed by Front Range, comprised of shares and warrants. .

## OUTLOOK – refer to forward looking statements advisory on page 2

The three months ended September 30, 2018 represents a two-day period of operations of the Company as the purchase of Carrao and the purchase of the Tapir Assets closed on September 27, 2018 and the reverse takeover transaction by way of plan of arrangement among Arrow Exploration Ltd. and Front Range. closed on September 28, 2018.

The Company is currently executing on its 2019 business plan which includes drilling the Rio Cravo Este-1 exploration well to earn a 50% working interest in the Tapir Association Contract in the Llanos Basin of Colombia. If Rio Cravo Este-1 is successful, the Company expects to have follow-up development drilling locations on the Rio Cravo Este prospect. In addition, the Company plans to recomplete two wells on its 100% owned Santa Isabel Block in the second half of 2019.

Credit Facility - the Company continues to pursue a credit facility or similar financing structure to provide working capital as well as development capital to advance the business.

Suspended contracts – the Company currently has two Blocks in indefinite states of suspension with the Agencia Nacional de Hidrocarburos (ANH). Los Picachos / Macaya (Arrow 38% working interest) and COR-39 (Arrow 100% working interest) were suspended prior to Arrow's acquisition thereof from Canacol. Los Picachos / Macaya has been suspended since April 7, 2016 and COR-39 has been suspended since November 24, 2017. The Picachos and Macaya E&P contracts are located on an Area of Environmental Protection and are unlikely to ever be developed. The Company ascribed nil value to the block when it was acquired from Canacol. COR-39 is an E&P contract located in an environmentally sensitive area where it has been impossible to initiate an Environmental Impact Study due to the opposition of local stakeholders. Arrow ascribed nil value to COR-39 when it was acquired from Canacol.



## CRITICAL ACCOUNTING ESTIMATES

A summary of the Company's significant accounting policies is contained in note 3 to the Company's September 30, 2018 unaudited interim 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 liabilities** – The Company recognizes the estimated fair value of the decommission 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.

### CHANGES IN ACCOUNTING POLICIES

As a result of the aforementioned reverse takeover of Front Range and the acquisition of Carrao and the Tapir Assets, the Company adopted a number of accounting policies as previously the Company had no active operations. As a result, the Company presented all its accounting policies in note 3 to the Company's September 30, 2018 unaudited interim financial statements.

#### Future Accounting Pronouncements

##### IFRS 16 – Leases

In January 2016, the International Accounting Standards Board ("IASB") issued IFRS 16, which will supersede IAS 17, Leases. Under IFRS 16, a lease will exist when a customer controls the right to use an identified asset as demonstrated by the customer having exclusive use of the asset for a period of time. IFRS 16 effectively removes the classification of leases as either finance or operating and treats all leases as finance leases for lessees with exemptions for short-term leases where the lease term is twelve months or less and for leases of low value items. The accounting treatment for lessors will remain largely the same as under IAS 17. The standard is effective for annual periods beginning on or after January 1, 2019 with early adoption permitted.

The Company is required to retrospectively apply IFRS 16 to all existing leases as of the date of transition and has the option to either: a) apply IFRS 16 with full retrospective effect; or b) recognise the cumulative effect of initially applying IFRS 16 as an adjustment to the opening equity at the date of initial application. The standard will be effective on January 1, 2019 for the Company. The Company is still assessing the potential impact (if any) on the financial statements given the recent nature of the acquisitions.



## **RISKS AND UNCERTAINTIES**

There are a number of risk factors facing Companies that participate in the oil and gas industry. A summary of certain risk factors relating to our business are disclosed below.

### **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.

### **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, bank borrowings available to Arrow are expected to be determined in part by the borrowing base of Arrow. A sustained material decline in prices from historical average prices could limit Arrow's borrowing base, therefore reducing the bank credit available to Arrow, and could require that a portion of any existing bank debt of Arrow be repaid.



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.

Arrow continually monitors the movement of commodity prices, interest rates and adjusts its capital expenditure program accordingly.

#### **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 debt or equity 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.

#### **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.



Joint venture receivables are from partners in the petroleum and natural gas industry who are subject to the risks and conditions of the industry. Significant changes in industry conditions and risks that negatively impact partners' ability to generate cash flow will increase the risk of not collecting receivables. Arrow does not typically obtain collateral from petroleum and natural gas marketers or joint venture partners; however the Company does have the ability to withhold production from joint venture partners in the event of non-payment or may be able to register security on the assets 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.

### **Insurance**

Arrow's involvement in the exploration for and development of oil and gas properties may result in Arrow becoming subject to liability for pollution, blow-outs, property damage, personal injury or other hazards. Although Arrow has insurance in accordance with industry standards to address such risks, such insurance has limitations on liability that may not be sufficient to cover the full extent of such liabilities. In addition, such risks may not, in all circumstances be insurable or, in certain circumstances, Arrow may elect not to obtain insurance to deal with specific risks due to the high premiums associated with such insurance or other reasons. The payment of such uninsured liabilities would reduce the funds available to Arrow. The occurrence of a significant event that Arrow is not fully insured against, or the insolvency of the insurer of such event, could have a material adverse effect on Arrow's financial position, results of operations or prospects.

### **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.