

ARROW EXPLORATION CORP.

**MANAGEMENT'S DISCUSSION AND ANALYSIS
THREE AND NINE MONTHS ENDED SEPTEMBER 30, 2018**





MANAGEMENT'S DISCUSSION AND ANALYSIS

Arrow Exploration Corp. (formerly Front Range Resources Ltd.) ("Arrow" or "the Company") 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 Resources Ltd.'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.

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 Company's shares are traded on the TSX Venture Exchange (the "TSXV") under the symbol AXL.

The head office of Arrow is located at 2400, 635 – 8th Avenue SW, Calgary, Alberta, Canada, T2P 3M3 and the registered office is located at Suite 3400, 350 – 7th Avenue SW, Calgary, Alberta, Canada, T2P 3N9.

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 Energy S.A. ("**Carrao Energy**") and the purchase of a 50% interest in the Tapir Association Contract (the "Tapir Interest") closed on September 27, 2018 and the RTO transaction by way of plan of arrangement among Arrow Exploration Ltd. and Front Range Resources Ltd. closed on September 28, 2018. As such, the third quarter of 2018 represents the inaugural reporting period of Arrow.

The Company is currently executing on its 2018 business plan which includes completing and testing the Danes-1 exploration well on the LLA-23 Block in the Llanos Basin in Colombia as well as completing a number of workovers on its LLA-23 Block and VMM-2 Block in the Middle Magdalena Basin in Colombia where it is partnered with Gran Tierra Energy (TSX: GTE) ("Gran Tierra").

The Company spudded the Danes-1 exploration well on the LLA-23 Block in Colombia on October 25, which was drilled and cased as planned to a measured depth of 11,276 feet in the Ubaque Formation. On November 19th, the Company announced preliminary logging results on Danes-1 indicating 43 feet of net oil pay in the Gacheta D2 and D3 Sands as well as the Ubaque Formation. The Company intends to complete and flow test the well before year-end 2018. If the Danes-1 flow test is successful, it will immediately be placed on production and the oil processed through Arrow's 100% owned and operated production facility at Pointer. Arrow is also undertaking a series of well workovers and recompletions which are expected to add to 2018 exit production levels in Colombia.

2019 Commitments – the Company must meet a capital spending commitment on the Tapir Block in the Llanos Basin in Colombia on or before March 31, 2019 which is expected to be fulfilled by drilling an exploration well. The drilling location for this well has been set for Rio Cravo Este-1 ("RCE-1"). Rio Cravo Este is a 3D seismically defined prospect which could have up to two development wells (RCE-2 & RCE-3) if the prospect is successfully drilled and deemed commercial.

Credit Facility - the Company is currently in the due diligence phase regarding a \$25 million Credit Facility with a globally recognized bank.



Advisories

The following management's discussion and analysis ("MD&A") is dated November 29th, 2018 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 three and nine months ended September 30, 2018 (the "financial statements"). The financial statements have been prepared in accordance with International Accounting Standard 34, "Interim Financial Reporting", 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.

Forward-Looking Statements – *Certain information set forth in this document contains 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, imprecision 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; 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 – *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.

Acquisitions

For the three months ended September 30, 2018, the Company's production primarily consisted of crude oil from its LLA-23 Block in the Llanos Basin in Colombia and, to a lesser extent, crude oil from its Santa Isabel, VMM-2 and Capella properties in Colombia and natural gas from its Canadian assets. The quarter consists of two days of oil & gas operations as the RTO by way of plan of arrangement with Front Range Resources Ltd. closed on September 28, 2018.

In addition to its producing fields, the Company has interests in five exploration blocks in Colombia. A summary table of the Company's Blocks can be found below.

<u>Asset</u>	<u>Basin</u>	<u>Working Interest</u>	<u>Operator</u>
1. LLA-23	Llanos	100%	Operated - Carrao Energy
2. Tapir	Llanos	50%	Operated - Petroleos Colombianos S.A.
3. Santa Isabel (Oso Pardo)	Magdalena	100%	Operated - Carrao Energy
4. VMM 2 (Mono Araña)	Magdalena	40%	Operated - Carrao Energy
5. Capella	Caguan/ Putumayo	10%	Non-operated - Emerald Energy PLC
6. COR 39	Magdalena	100%	Operated - Carrao Energy
7. Los Picachos	Caguan/ Putumayo	38%	Non-operated Hupecol Operating Co
8. Macaya	Caguan/ Putumayo	38%	Non-operated - Hupecol Operating Co
9. Coati	Caguan/ Putumayo	20%	Non-operated - Amerisur Exploration
10. Fir	WCSB	30%	Non-operated - Tourmaline

All the Company's Colombian assets (#1 – 9 in the table above) are oil producing with realized prices linked to Brent Oil. Arrow's Canadian producing asset (Fir) is a natural gas asset located in the province of Alberta.

Revenue, Royalties and Operating Costs

	Three months ended September 30,		Nine months ended September 30,	
	2018	2017	2018	2017
Production revenue	\$ 174,855	\$ -	\$ 174,855	\$ -
Less: Royalties	(16,598)	-	(16,598)	-
Operating costs	(70,326)	-	(70,326)	-
	\$ 87,931	\$ -	\$ 87,931	\$ -

Colombian production averaged 1,350 boe/d of oil directly attributed to the Carrao Energy acquisition and 131 boe/d equivalent of gas and liquids production in Canada. Only two days of operations were recognized in the respective 2018 three and nine month periods. The average oil price received in Colombia was \$62.94/boe and \$12.41/boe in Canada.

General and Administrative Expenses and Transaction Costs

	Three months ended September 30,		Nine months ended September 30,	
	2018	2017	2018	2017
Gross G&A	\$ 268,685	\$ 50	\$ 836,072	\$ 1,150
Transaction Costs	1,073,656	-	1,073,656	-
Total	\$ 1,342,341	\$ 50	\$ 1,909,728	\$ 1,150



Gross general and administrative (“G&A”) expenses increased in the 2018 respective three and nine month periods predominately due to internal due diligence and travel costs associated with the Front Range reverse takeover, Carrao Energy and Tapir Interest acquisitions. The Company did not have material operations in the 2017 fiscal periods. Management will be assessing G&A costs and will make a determination as to the eligible costs inclusive of management salaries for capitalization directly related to exploration and evaluation activities. Transaction costs were primarily legal costs associated with the acquisitions and reverse takeover.

Finance Expense

	Three months ended September 30,			Nine months ended September 30,		
	2018	2017	Change	2018	2017	Change
Financing expense paid or payable	\$ 4,110	\$ -	100%	\$ 4,110	\$ -	100%
Non-cash financing costs	1,100	-	100%	1,100	-	100%
Net finance expense	\$ 5,110	\$ -	100%	\$ 5,110	\$ -	100%

The finance expense paid or payable represents two days’ interest on the promissory note due to vendor Canacol Energy Ltd., as partial payment for the acquisition of Carrao Energy and which bears interest at 15% per annum. The non-cash finance cost represents the increase in the present value of the decommissioning obligation for the current period and 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 Contracts

During the three and nine months ended September 30, 2018, the Company has not entered into any commodity contracts but may enter into such contracts going forward to hedge commodity risk and protect cashflow.

Stock-Based Compensation Expense

This expense, when incurred, will represent the fair value of the Company’s stock options at the grant date as options granted under the current plan vest at the date of the grant and are expensed using the graded vesting method. Company options are non-transferable. Future expense will vary as it is dependent on the number and vesting provisions of future stock option grants.

Depletion and Depreciation Expense

	Three months ended September 30,			Nine months ended September 30,		
	2018	2017	Change	2018	2017	Change
Depletion and depreciation expense	\$ 13,793	\$ -	100%	\$ 13,793	\$ -	100%

Depletion and depreciation expense was realized in the three and nine months ended September 30, 2018 due to the Company closing the RTO transaction with Front Range and the acquisitions of Carrao Energy and a 50% interest in the Tapir Association Contract. The Company owned the assets for two days in the quarter, therefore, the depletion expense will increase accordingly on a go forward basis. The Company uses its proved plus probable reserves to calculate depletion expense.

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.

	September 30, 2018
Current assets	\$ 6,839,111
Accounts payable and accrued liabilities	(6,385,989)
Promissory Note – principal	(5,000,000)
Net debt	\$ 4,546,878

Credit Facilities and Debt

The Company currently has \$5mm in outstanding debt in the form of a Promissory Note payable to Canacol Energy Ltd. ("Canacol"). The Note is due on January 28, 2019 and bears interest at the rate of 15% per annum. The Company is currently in the due diligence phase of securing a Credit Facility with a globally recognized bank which will be used to repay the Promissory Note due to Canacol as well as for general corporate purposes.

Consolidated Total Debt	September 30, 2018
Promissory Note – principal	\$ 5,000,000
Consolidated Total Debt	\$ 5,000,000

Promissory Note

On September 27, 2018, the Company entered into a \$5 million Promissory Note with Canacol. The note matures on January 28, 2019 and bears interest at the rate of 15% per annum.

Other Credit Facilities

The Company is in the due diligence phase with a globally recognized bank on a \$25 million Credit Facility. The use of proceeds will be to repay the Canacol Promissory Note as well as for general corporate purposes.

Letters of Credit

At September 30, 2018, the Company had obligations under letters of credit outstanding totaling \$21.9 million to guarantee work commitments on exploration blocks and to guarantee other contractual commitments. These letters of credit are being transitioned to Arrow from Canacol.

Share Capital

At September 30, 2018, the Company had 68.7 million common shares, 480,659 stock options, 634,638 Agents options and 19 million warrants outstanding.



Subsequent Events

In October 2018, the Company issued 6,350,000 options exercisable at CAD \$1.15. The options vest in thirds, with one-third vesting upon each of the first, second and third anniversaries of issuance, and expire on October 22, 2028.

CONTRACTUAL OBLIGATIONS

The following table provides a summary of the Company's cash requirements to meet its financial liabilities and contractual obligations existing at September 30, 2018:

	Less than 1 year	1-3 years	Thereafter	Total
Promissory Note	\$ 5,000,000	\$ -	\$ -	\$ 5,000,000
Accounts payable and accrued liabilities	6,385,989	-	-	6,385,989
Exploration and production contracts	8,800,000	38,000,000	-	46,800,000
Office leases	133,546	34,761	-	168,307

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 September 30, 2018 of \$46.8 million and has obligations relating to \$21.9 million in financial guarantees related thereto and being transitioned from Canacol to Arrow. These commitments are planned to be satisfied by means of seismic work, exploration drilling and farm-outs.

Oleoducto Bicentenario de Colombia ("OBC") Pipeline

The Company owns a 0.5% interest in OBC, which owns a pipeline system that will link Llanos basin oil production to the Cano Limon oil pipeline system in Colombia. Under the terms of the OBC agreement, the Company may be required to provide financial support or guarantees for its proportionate equity interest in any future debt financings undertaken by OBC.

SUMMARY OF QUARTERLY RESULTS

	Q3	2018			2017			2016
		Q2	Q1	Q4	Q3	Q2	Q1	Q4
Petroleum and natural gas sales, net of royalties	158,257	-	-	-	-	-	-	-
Net loss	(1,265,672)	(359,560)	(312,107)	(4,193)	(50)	(75)	(50)	(370)
Loss per share – basic and diluted	(0.02)	-	-	-	-	-	-	-
Working capital (deficit)	(4,546,878)	(671,359)	(308,534)	(3,598)	(545)	(495)	(420)	(370)
Total assets	76,448,190	26,131	20,542	4,347	-	-	-	-
Net capital expenditures	62,624,775	-	-	-	-	-	-	-
Average daily production (boe/d) (1)	1,481	-	-	-	-	-	-	-

Note: (1) average daily production for last 2 days of the quarter.

Until the first quarter of 2018, the Company had no operations. In the first quarter of 2018, a management team was assembled to commence due diligence on the Carrao Energy assets and review financing options which resulted in the previously mentioned Reverse Takeover of Front Range Resources Ltd. As a result of closing the acquisitions and financing transactions on September 28, 2018, Arrow only recorded two days of oil and gas operations in the current quarter.



OUTSTANDING SHARE DATA

At November 27, 2018, 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	40,288	\$CAD 4.25	December 27, 2018
Stock options	10,959	\$CAD 4.25	December 27, 2018
Stock options	429,412	\$CAD 8.92	December 27, 2018
Stock options	6,350,000	\$CAD 1.15	October 22, 2028
Warrants	18,957,398	\$US 1.30	September 24, 2020
Agent's options	634,638	\$US 1.00	September 24, 2020

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 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.

CHANGES IN ACCOUNTING POLICIES

As a result of the aforementioned reverse takeover of Front Range Resources Ltd. and the acquisition of Carrao Energy assets and the Tapir Interest, 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 in the 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 how recent the acquisitions are.



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 SEDAR filings, is the primary means of communicating to the general public when required. 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.