

# Canacol Energy Ltd. Announces Conventional Natural Gas Prospective Resources

CALGARY, ALBERTA - (April 11, 2017) - Canacol Energy Ltd. ("Canacol" or the "Corporation") (TSX: CNE; OTCQX: CNNEF; BVC: CNEC) is pleased to report on the conventional natural gas prospective resources (resources other than reserves, ROTR) for its Esperanza, VIM-21, VIM-5, and VIM-19 exploration blocks in the Lower Magdalena valley basin of Colombia. Prospective resources are based on a new independent resources audit prepared by Gaffney, Cline & Associates ("GCA"), effective December 31, 2016 (the "GCA Report").

# **Canacol Energy Ltd Gross Prospective Resources Summary**

		Gross Prospective Resources (1)					
		Mean					
		Unrisked Prospective Resources	Risked Prospective Resources				
Conventional natural gas	BCF	2,037.0	482.0				
Before tax EMV-10 (2)	US \$MM		789.0				

- (1) Gross prospective resources are represented at Canacol's 100% working interest share before royalties.
- (2) Expected Monetary Value (EMV) is stated in millions of USD and is discounted at 10 percent.

Charle Gamba, President and CEO of Canacol, commented "The Corporation has achieved significant conventional natural gas exploration and development drilling success across its substantial acreage position in the Lower Magdalena valley basin over the past 3 years. Mark Teare, Canacol's Senior Vice President of Exploration will comment about our large inventory of conventional natural gas opportunities, and the Corporation's recent engagement of GCA to prepare an independent audit of the prospective resources of the inventory plays, prospects and leads."

Mr. Teare said "GCA's independent prospective resources audit evaluated and estimated conventional natural gas prospective resources for 47 individual prospects and leads, which Canacol has aggregated to an unrisked mean of 2 trillion standard cubic feet or a risked mean of 482 billion standard cubic feet. The estimated prospective resources underline the significant potential of Canacol's exploration blocks located in the Lower Magdalena valley basin of northern Colombia. Using state of the art 3D seismic acquisition and processing technology, our subsurface G&G technical team has developed techniques to high-grade prospects that may be gas charged in the Oligocene aged Cienaga de Oro Formation ("CDO") thereby reducing the geological risk associated with drilling of the prospects.

In addition, recent exploration drilling success at the Nelson 6 exploration well has opened up a new shallow gas play in the Miocene aged Porquero Formation ("Porquero"), which our subsurface G&G team is currently investigating further across our blocks. With an established prospect and lead inventory that contains multiple exploration drilling targets in the CDO, and a new gas exploration fairway proven in the shallow Porquero sandstone reservoir, we anticipate being very busy exploring our blocks in the foreseeable future."

# Third Party Independent Audit for Conventional Natural Gas Prospective Resources (Resources Other Than Reserves, ROTR)

The following discussion is subject to a number of cautionary statements, assumptions and risks as set forth therein. See "Information Regarding Disclosure on Oil and Gas Resources and Operational Information" at the end of this release for additional cautionary language, explanations and discussion, and see "Forward-looking Statements" for a statement of principal assumptions and risks that may apply. See also "Definitions" in this press release. The discussion includes reference to prospective resources as per the GCA Report, which was prepared in accordance with the COGE Handbook.

GCA was commissioned to conduct an independent prospective resources audit of Canacol's internal estimates of prospective resources for the Corporation's 100% Working Interest position in the Esperanza, VIM-21, VIM-5, and VIM-19 exploration blocks in the Lower Magdalena valley basin (the "Audited Areas") effective December 31, 2016. All references in the following discussion to prospective resources are in reference to conventional natural gas in the Audited Areas included in the GCA Report.

On an unrisked and risked basis, the following table represents an aggregation of gross prospective resources and associated after royalty before tax expected monetary value for identified plays, leads and prospects (1, 2, 3) on the four exploration blocks.

- (1) Play: A family of geologically similar fields, discoveries, prospects and leads.
- (2) Lead: A potential accumulation within a play that requires more data acquisition and/or evaluation in order to be classified as a prospect.
- (3) Prospect: A potential accumulation within a play that is sufficiently well defined to represent a viable drilling target.

					Risked		
	Unriske	ed Prospecti	ive Resource	Prospective Resources	BT EMV		
	Low	Best	Mean	High	Mean		
	P90	P50		P10	(BCF)	(US \$MM)	
Total	1,418	1,910	2,037	2,768	482	\$ 789	

# **Cautionary Statement:**

- 1. There is no certainty that any portion of the resources will be discovered. If discovered, there is no certainty that it will be commercially viable to produce any portion of the resources.
- 2. An estimate of expected monetary value of future net revenue of prospective resources is preliminary in nature and is provided to assist the reader in reaching an opinion on the merit and likelihood of the Corporation proceeding with the required investment. It includes prospective resources that are considered too uncertain with respect to the chance of discovery and chance of development to be classified as reserves. There is uncertainty that the expected monetary value of future net revenue will be realized.

#### **Table Notes**

- (1) The GCA Report includes estimates of unrisked prospective resources, risked prospective resources and EMVs for individual prospects and leads. The aggregations of these estimates were prepared by Canacol.
- (2) The Corporation aggregates probabalistically to the country level for internal portfolio management and long term planning. As required by COGEH Volume 2, Sections 2.8.1, an explanation of this aggregation methodology is provided. A single distribution of prospective resource volumes on an unrisked and risked basis was generated by means of a multiple trial Monte Carlo simulation incorporating Chance of Discovery (Geological Chance of Success (GCOS)), and Chance of Development (CoD) of all 47 prospects and leads from GCA's audit. From the distribution, the Mean is the average value of the distribution, and as such represents the most accurate single point estimation of the expected recoverable volume. The Mean of the distribution is represented on a risked basis relative to the unrisked case to provide the reader a more balanced perspective on the likely outcome of an exploration drilling program of all 47 prospects and leads.
- (3) CoD was quantified by GCA for each prospect and lead by combining the chance of achieving a minimum economic field size (MEFS) with the chance that a discovery would be developed i.e. the chance of achieving commerciality. The overall risked volume for a given prospect or lead is the combination of GCoS and CoD applied to the unrisked volume with the exception that if the EMV for the prospect or lead is negative, the CoD was set to zero resulting in zero risked resource.
- (4) The volumes reported in the table above (Low (P90), Best (P50), Mean, High (P10)) are Gross Prospective Resources volumes at Canacol's Gross Working Interest (100%) in the exploration blocks.
- (5) All prospects and leads included in this release are conventional natural gas. Conventional natural gas volumes are reported in billions of cubic feet at standard conditions of 1 Bar and 20° Celsius.
- (6) Opportunities reported above are potential hydrocarbon accumulations identified on the basis of available data, and depending on the level of information available for their assessment are sub classified as plays, leads and prospects. The assessed GCoS varies, from opportunity to opportunity, and GCA has stated that the leads may require additional seismic data prior to becoming viable drillable prospects. One third of the opportunities are classified as leads.
- (7) The mean aggregate Expected Monetary Value (EMV) in the table above are summations of individual prospect and lead mean EMVs which are calculated as being independent of each other. A schedule for exploration activity was applied to the economic analysis so that a reasonable timing assumption for drilling was represented. This schedule assumes the procurement of four rigs operating over three years to assess the potential of the portfolio.
- (8) The EMVs are the product of a decision tree analysis whereby cash flows using a 10% annual discount rate and incorporating the fiscal regime governing the prospects and leads are multiplied by GCoS and CoD, representing the success case, and added to the cash flow of the failure case of a dry hole multiplied by one minus the product of GCoS and CoD. For a given prospect or lead, the mean EMV represents the arithmetic average of expected EMVs. In the table, before tax EMV-10 is represented as the sum of the mean EMVs for each prospect and lead
- (9) Economic modeling was based on a pre-development study representing assumptions derived from the Corporation's experience of drilling exploration and development wells, construction of gathering systems and flowlines, and the expansion of processing facilities within the prospective area.
- (10) The gas price forecast used in the EMV analysis assumed US \$5.62/mcf (the volume weighted average price of Canacol's signed contracts at the time of the analysis) escalated at 2%/yr starting in 2017.
- (11) To realize the modeled US \$789 MM EMV10, the total risked capital to achieve commercial production in the mean case is US \$742 MM. Over the 3 year schedule for exploration activity, the total capital associated with exploration activity is estimated to be US \$194 MM
- (12) In estimating EMVs, no adjustment has been made for the risk that an economically viable discovery, if made would not be developed in a timely manner.
- (13) The EMVs reported here do not represent an opinion as to the market value of a property or any interest therein.

The representation of prospective resources in the GCA report reflects the resource potential of the Corporation's 100% working interest land position (785,000 acres) in the Lower Magdalena valley basin. Of primary importance is the resource potential of the CDO comprised of up to 5000 feet of deltaic and marginal marine sandstones and shales. The CDO play is characterized by structural features such as faulted horst blocks and faulted three-way dip anticlinal closures. Specific prospects are identified and mapped using 3D seismic, and technical risk is further mitigated by the application of seismic attribute analysis to investigate the presence of gas-charged sandstones. The Corporation has enjoyed significant success in both its exploration and development drilling program with the CDO play, with 5 out of 6 exploration wells encountering gas (83% GCoS), and 4 out of 4 development wells encountering gas.

The Corporation is committed to investigate new plays in addition to the CDO play to mitigate exploration risk. Of particular interest are the turbiditic sandstone reservoirs of the shallow Porquero. The new Porquero play is typically characterized by faulted, three-way dip anticlinal closures, but may also have a stratigraphic component. Porquero exploration prospects are identified and mapped using 3D seismic, and technical risk is further mitigated by the application of seismic attribute analysis to investigate the presence of gas-charged sandstones. Recent exploration success at Nelson 6 has successfully demonstrated the effectiveness of the seismic attribute analysis and confirmed the commerciality of the shallow Porquero play. Work in progress on recently reprocessed 3D seismic data has identified additional potential for the Porquero play.

For both the CDO and the Porquero plays, and based upon the representation of prospective resources in the GCA Report, management expects that significant additional resources will be developed in the future with continued drilling success on currently undeveloped blocks. The significant factors that may change the prospective resources estimates include the outcome of further exploration and delineation drilling, which may change the estimates either positively or negatively, future technology improvements, which would positively affect the estimates, additional processing capacity that could positively affect the volumes recovered e.g. additional compression, and the requirement to meet regulatory contractual commitments to acquire seismic and drill exploratory wells to retain acreage.

In accordance to the six considerations for Commerciality outlined in COGE Handbook Volume 2 Section 2.4.4, GCA represents risked prospective resources as a function of the Chance of Development (CoD) of any future discovery. Estimating CoD requires that the related development project be commercial such that the commerciality conditions of regulatory approval for facilities, flow lines and access to markets are met. All prospects and leads fall within 50 km of the Corporation's central processing facility at Jobo that may be easily expanded as required. The Corporation has successfully secured sales contracts for its existing production, and is confident of its ability to secure future contracts in an expanding market both along the Caribbean coast and inland Colombia. To achieve its current production levels for natural gas in northern Colombia, the Corporation has demonstrated its ability to manage other contingencies such as legal, regulatory, political, social license, internal and external approvals and access to project finance to ensure the timely execution of its exploration and field development plans in the future. Appropriate levels of capital investment are anticipated to ensure future full field development including drilling, tie-in, infrastructure buildout for facilities and flowlines, and abandonment and reclamation. The Corporation has prepared a realistic schedule for the execution of its proposed exploration drilling campaign over the next three years along with additional time scheduled for follow-up development drilling, installation of flow-lines, and plant expansion as required. Future field development will be for conventional natural gas. There is no expectation of HPHT (High Pressure High Temperature) reservoirs in the Lower Magdalena valley basin. Any discovery will be developed using existing industry technology with standard gas completions in the well-bores, and standard surface treatment and compression facilities in a same manner as the seven operated fields presently under production (Nelson, Palmer, Clarinete, Oboe, Ariana, Canaflecha, and Katana).

## **Definitions**

Resource definitions, including those set out below, are as specified by NI 51-101, including by reference to CSA Staff Notice 51-324 – Glossary to NI 51-101 Standards of Disclosure for Oil and Gas Activities and the COGE Handbook.

"Resources" are quantities of petroleum that are estimated to exist originally in naturally occurring accumulations, including the quantity of petroleum that is estimated, as of a given date, to be contained in known accumulations, prior to production, plus those estimated quantities in accumulations yet to be discovered.

"Prospective Resources" are defined as those quantities of petroleum estimated, on a given date, to be potentially recoverable from known accumulations using established technology or technology under development, but which are not currently considered to be commercially recoverable due to one or more contingencies. Contingencies may include factors such as economic, legal, environmental, political and regulatory matters or a lack of markets.

As used in this press release, "BCF" means billion standard cubic feet.

The above prospective resources volumes under the heading "un-risked" have not been adjusted for the Chance of Discovery and the Chance of Development, while the prospective resources volumes under the heading "risked" have been risk discounted for the GCA's estimates of Chance of Discovery (Geological Chance of Success (GCoS)) and Chance of Development (CoD) which involves assessing various risks based upon a number of assumptions and other factors. The Chance of Development is the probability that a resource, once it has been discovered, will ultimately be commercially developed. While the Corporation believes that such estimates and underlying assumptions are reasonable, many of these assumptions are beyond the Corporation's control, are subject to change and may not, over time, prove to be accurate. As a result, the actual level of various risks (including those currently identified and that may be identified in the future) could prove to be greater and the Chance of Development lower than currently estimated. Such differences could be material.

The estimates of prospective resources provided in this press release are estimates only and there is no guarantee that the estimated prospective resources will be recovered. Actual prospective resources may be greater than or less than the estimates provided in this press release and the differences may be material. There is no certainty that any portion of the prospective resources will be discovered. If discovered, there is no certainty that it will be commercially viable to produce any portion of the prospective resources.

Estimates of prospective resources are by their nature more speculative than estimates of proved reserves and would require substantial capital spending over a significant number of years to implement recovery. Actual locations drilled and quantities that may be ultimately recovered from our properties will differ substantially. In addition, we have made no commitment to drill, and likely will not drill, all of the drilling locations that have been attributable to these quantities.

The following classification of prospective resources represented probabilistically as used in this press release:

- Low Estimate means there is at least a 90 percent probability (P90) that the quantities actually recovered will equal or exceed the low estimate.
- Best Estimate means there is at least a 50 percent probability (P50) that the quantities actually recovered will equal or exceed the best estimate.
- High Estimate means there is at least a 10 percent probability (P10) that the quantities actually recovered will equal or exceed the high estimate.
- Mean Estimate represents the arithmetic average of the expected recoverable volume. It is the most accurate single point representation of the volume distribution.

## Information Regarding Disclosure on Oil and Gas Resources and Operations

All amounts in this press release are stated in United States dollars unless otherwise specified.

Other than as otherwise disclosed in this press releases, projects have not been defined to develop the resources in the evaluated areas as at the evaluation date. Such projects have historically been developed sequentially over a number of drilling seasons and are subject to annual budget constraints, Canacol's policy of orderly development on a staged basis, the timing of the growth of third-party infrastructure, the short- and long-term view of Canacol on gas prices, the results of exploration and development activities of Canacol and others in the area and possible infrastructure capacity constraints.

Canacol is an exploration and production company with operations focused in Colombia and Ecuador. The Corporation's common stock trades on the Toronto Stock Exchange, the OTCQX in the United States of America, and the Colombia Stock Exchange under ticker symbol CNE, CNNEF, and CNE.C, respectively.

#### **Forward-Looking Information and Statements**

This press release contains certain forward-looking information and statements within the meaning of applicable securities laws. The use of any of the words "expect," "anticipate," "continue," "estimate," "objective," "ongoing," "may," "will," "project," "should," "believe," "plans," "intends," "strategy," and similar expressions are intended to identify forward-looking information or statements.

The forward-looking information and statements contained in this press release reflect several material factors and expectations and assumptions of Canacol including, without limitation: that Canacol will continue to conduct its operations in a manner consistent with past operations; results from drilling and development activities are consistent with past results; the continued and timely development of infrastructure in areas of new production; the general continuance of current industry conditions; the continuance of existing (and in certain circumstances, the implementation of proposed) tax, royalty and regulatory regimes; the accuracy of the estimates of Canacol's resource volumes; certain commodity price and other cost assumptions; and the

continued availability of adequate debt and equity financing and cash flow to fund its planned expenditures. There are a number of assumptions associated with the development of the prospects and leads, including the quality of the reservoirs, continued performance from existing wells, future drilling programs and performance from new wells, the growth of infrastructure, well density per section, and recovery factors and development necessary involves known and unknown risks and uncertainties, including those risks identified in this press release. Canacol believes the material factors, expectations and assumptions reflected in the forward-looking information and statements are reasonable but no assurance can be given that these factors, expectations and assumptions will prove to be correct.

The forward-looking information and statements included in this press release are not guarantees of future performance and should not be unduly relied upon. Such information and statements involve known and unknown risks, uncertainties and other factors that may cause actual results or events to differ materially from those anticipated in such forward-looking information or statements including, without limitation: changes in commodity prices; the early stage of development of some areas in the evaluated areas; the potential for variation in the quality of formations, changes in the demand for or supply of Canacol's products; unanticipated operating results or production declines unanticipated results from Canacol's exploration and development activities; changes in tax or environmental laws, royalty rates or other regulatory matters; changes in development plans of Canacol, increased debt levels or debt service requirements; inaccurate estimation of Canacol's oil and gas reserve and resource volumes; limited, unfavorable or a lack of access to capital markets; increased costs; a lack of adequate insurance coverage; the impact of competitors; and certain other risks detailed from time to time in Canacol's public disclosure documents (including, without limitation, those risks identified in this news release and in Canacol's most recent Annual Information Form).

The forward-looking information and statements contained in this news release speak only as of the date of this news release, and none of Canacol or its subsidiaries assumes any obligation to publicly update or revise them to reflect new events or circumstances, except as may be required pursuant to applicable laws.

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