ZION OIL & GAS INC Form 424B5 September 29, 2010

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PROSPECTUS SUPPLEMENT (To Prospectus dated April 16, 2010)

Zion Oil & Gas, Inc.

3,820,391 Nontransferable Subscription Rights to subscribe for
Units of securities of Zion Oil & Gas, Inc., each consisting of
(i) one (1) share of common stock par value \$0.01 per share and
(ii) one (1) common stock purchase warrant to purchase one (1) additional share of common stock at \$4.00 per share

Up to 3,820,391 Shares of Common Stock and
Warrants to purchase up to 3,820,391 shares of Common Stock
Issuable Upon Exercise of Nontransferable Subscription Rights to subscribe for such Shares and Warrants and up to an additional 3,820,391 Shares of Common Stock issuable upon Exercise of Warrants to purchase up to 3,820,391 shares of Common Stock

ZION OIL & GAS, INC. is distributing, at no cost, non-transferable subscription rights to purchase units (each a "Unit" and collectively the "Units") of its securities to persons who owned shares of our common stock on September 28, 2010, with each Unit consisting of (i) one (1) share of our common stock, par value \$0.01 per share (the "Common Stock"), and (ii) one (1) warrant to purchase an additional share of our Common Stock at an exercise price of \$4.00 per share (each a "Warrant") and collectively the "Warrants"). Each Unit may be purchased at a per Unit subscription price of \$5.00.

You will receive 0.18 of a subscription right (i.e., EIGHTEEN subscription rights for each ONE HUNDRED shares) for each share of common stock that you owned on September 28, 2010. The Warrant is exercisable for a two (2) year period beginning after the expiration of the rights offering.

The subscription rights will expire if they are not exercised by 5:00 p.m., Eastern Standard Time, on November 15, 2010. If you want to participate in the rights offering, you must submit your subscription documents to us before that deadline. If you hold shares through a broker or a bank, we recommend that you submit your subscription documents to your broker or bank at least 10 days before that deadline. Please see page S-7 for further instructions on submitting subscriptions. All subscriptions will be deposited into a segregated account maintained by us. We may, in our sole discretion, extend the period for exercising rights. There is no minimum subscription amount required for consummation of this rights offering.

If you exercise your rights in full, you may also exercise an over-subscription right to purchase additional Units that remain unsubscribed at the expiration of the rights offering, subject to availability and allocation of Units among persons exercising this over-subscription right. Subscription rights that are not exercised by the expiration date will expire and have no value. Shareholders who do not participate in the rights offering will continue to own the same number of shares, but will own a smaller percentage of the total shares outstanding to the extent that other shareholders participate in the rights offering.

The subscription rights may not be sold or transferred except for being transferable to affiliates of the recipient and by operation of law.

Our common stock is quoted on the NASDAQ Global Market under the symbol "ZN". The shares of Common Stock included in the Units and the shares of Common Stock issued pursuant to the terms of the Warrants will be listed on the NASDAQ Global Market under the "ZN" symbol. The last sale price of our common stock on the NASDAQ Global Market on September 27, 2010 was \$5.38. The Warrants to be issued pursuant to this offering will be separately transferable following their issuance through their expiration date. The Warrants are not currently trading on any market. We have filed an application with NASDAQ to list the Warrants on the NASDAQ Global Market. If our application is accepted, the symbol "ZNWAZ" has been reserved to designate the Warrants. The subscription rights are non-transferable.

Investing in the securities offered by this prospectus is risky. You should read this prospectus carefully before you invest. You should carefully consider the "Risk Factors" section beginning on page S-12 before deciding whether to exercise your subscription rights.

	Subscription	on Exercise	Proceeds to
	Price P	er Unit ZION O	IL & GAS, INC. (1)
Per Unit	\$	5.00 \$	19,101,955
Total	\$	5.00 \$	19,101,955

(1) Assumes that all Units being offered in the rights offering are sold and before deducting expenses payable by us, estimated to be \$150,000. This figure does not consider the proceeds receivable by us, if any, upon the exercise of the Warrants. If all Warrants are subsequently exercised, of which no assurance can be provided, we would receive additional gross proceeds of \$15,281,564, before deducting any warrant exercise related expenses that we may incur.

The securities are not being offered in any jurisdiction where the offer is not permitted under applicable local laws.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

The date of this prospectus supplement is September 29, 2010

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ABOUT THIS PROSPECTUS SUPPLEMENT

This document is in two parts. The first part is this prospectus supplement, which describes the specific terms of this offering of common stock. The second part is the accompanying prospectus, which gives more general information, some of which may not apply to this offering of common stock. To the extent there is a conflict between the information contained in this prospectus supplement and the information contained in the accompanying prospectus, you should rely on the information in this prospectus supplement.

You should rely only on the information contained or incorporated by reference in this prospectus supplement, the accompanying prospectus, and any free writing prospectus that we authorize to be distributed to you. We have not authorized anyone to provide you with different or inconsistent information. If anyone provides you with different or inconsistent information, you should not rely on it. We are not, making an offer to sell these securities in any jurisdiction where the offer or sale is not permitted. You should assume that the information appearing in this prospectus supplement, the accompanying prospectus, the documents incorporated by reference into this prospectus supplement and the accompanying prospectus, and any free writing prospectus is accurate only as of the date of those respective documents. Our business, financial condition, results of operations, and prospects may have changed since such dates.

Unless otherwise indicated, all references to "Zion Oil & Gas", "Company", "our", "we", "us", and similar terms refer to Zion Oil & Gas, Inc.

PROSPECTUS SUPPLEMENT SUMMARY

The following summary highlights selected information contained elsewhere or incorporated by reference in this prospectus supplement and the accompanying prospectus. This summary does not contain all the information about us that you should consider before investing in our common stock. You should carefully read this entire prospectus supplement, the accompanying prospectus and any free writing prospectus, including "Risk Factors" on page S-12 this prospectus supplement and, the financial statements and related notes and other information included or incorporated by reference in this prospectus supplement and the accompanying prospectus, before making an investment decision.

Zion Oil & Gas Inc.

We are an initial stage oil and gas exploration company with a history of over nine years of oil and gas exploration in Israel. We have no revenues or operating income and are classified as an "exploration stage" company.

We currently hold two exploration licenses, which we call the Joseph License and the Asher-Menashe License, covering approximately 162,100 acres onshore in the State of Israel between Netanya in the south and Haifa in the north. The areas have been subject to a series of exploration permits and licenses that have been granted to and held by us pursuant to the Israeli Petroleum Law. In August 2009, we were awarded a preliminary exploration permit with priority rights on approximately an additional 165,000 acres onshore Israel. The permit allows us to conduct, on an exclusive basis through February 23, 2011, preliminary investigations, except for test drilling, to ascertain the prospects for discovering petroleum in the area covered by the permit. Unlike a license area, where test drilling may take place, no test drilling is allowed on a permit area. The permit area is adjacent to and to the east of our current license areas. The new permit, which we have named as the Issachar-Zebulun Permit, extends our petroleum rights from the Mediterranean at Caesarea across the Carmel Mountains to Megiddo and through to the Jordan River immediately south of the Sea of Galilee.

The Joseph License and Asher-Menashe License areas, as well as the Issachar-Zebulun permit area, are contiguous in a similar geologic environment. They are located on a continuous regional high associated with the basement to a

Paleozoic Age structure (approximately 280 million years old) that runs parallel to the current coast of Israel primarily onshore, from just off of Haifa to south of Tel Aviv. The regional high is evidenced by gravimetric anomalies in both license areas. This structure and other geologic elements common to both areas, including particularly the Triassic Age (approximately 205-245 million years ago) Ma'anit structure that extends from the Joseph License area into the Asher-Menashe License area, lend themselves to an integrated exploratory program (and, if successful, may lend themselves to an integrated development program).

To date, we have completed drilling two exploratory wells in the Joseph License area and are in the process of drilling one exploratory well in the Asher Menashe License Area. The first exploratory well, named the Ma'anit #1 well, was drilled to a depth of 15,842 feet (4.829 meters) to the Triassic formation with encouraging but inconclusive results. However, notwithstanding these results, due to the mechanical condition of the well-bore, we determined that the well was incapable of producing oil and/or gas in commercial quantities and, consequently, in June 2007 we abandoned the well. In 2009, utilizing a 2,000 horsepower drilling rig which was refurbished to meet our needs and brought into Israel, we drilled an additional well (the Ma'anit-Rehoboth #2 well), 'directionally' from the Ma'anit #1 well, to a depth of 17,913 feet (5,460 meters). The purpose of the Ma'anit-Rehoboth #2 well was to appraise the apparent findings of the Ma'anit #1 in the Triassic (at a depth of between approximately 12,000 and 15,400 feet) and to test the deeper Permian horizons at a depth of between approximately (16,000 and 18,000 feet). The well penetrated a number of geologic formations that were preliminarily deemed to have hydrocarbon potential and, during well operations, we retrieved a small quantity of crude oil. In February 2010, we began completions/testing of the Ma'anit-Rehoboth #2 well. In April 2010, following the completion of testing procedures, we determined that commercial quantities of hydrocarbons were not present in the Ma'anit-Rehoboth #2 well and, accordingly, we suspended drilling operations in that well. In connection with this decision, we recognized a non-cash impairment charge to our unproved oil and gas properties for the quarter ended June 30, 2010.

On October 20, 2009, utilizing the 2,000 horsepower drilling rig used to drill our Ma'anit-Rehoboth #2 well, we commenced drilling an additional well (the Elijah #3 well) on our Asher-Menashe license toward the Triassic geological formation, which is expected below approximately 10,000 feet (3,048 meters). As of February 2, 2010, we drilled to a depth of 10,938 feet (3,334 meters). In early February 2010, we temporarily suspended drilling operations in the well following our unsuccessful efforts to retrieve a stuck pipe pending further analysis of the situation. We have recently acquired approximately 32 kilometers of additional field seismic data intended to resolve certain questions regarding the geology of the area surrounding the Elijah #3 well. This seismic data is currently being processed by a geophysical consultant in the United States into usable graphic imagery that will then be interpreted by our geologists to better understand the sub-surface geology in the area surrounding the Elijah #3 well and also in their search for future drilling prospects. The processing and interpretation of this data is expected to be finalized by December 2010.

As the Ma'anit-Rehoboth #2 well did not reach the Permian geological formation beneath the Joseph license area, we spudded the Ma'anit-Joseph #3 well at a location near to the Ma'anit-Rehoboth #2 well. The drilling of the Ma'anit-Joseph #3 well is planned to test the Permian geological formation. As of September 21, 2010, we have reached an estimated depth of 1,209 meters (3,967 feet).

Our ability to generate future revenues and operating cash flow will depend on the successful exploration and exploitation of our current and any future petroleum rights or the acquisition of oil and/or gas producing properties, the volume and timing of our production, as well as commodity prices for oil and gas. Such pricing factors are largely beyond our control, and may result in fluctuations in our earnings.

Our company's vision, as exemplified by its Founder and Chairman, John Brown, of finding oil and/or natural gas in Israel, is biblically inspired. The vision is based, in part, on biblical references alluding to the presence of oil and/or natural gas in territories within the State of Israel that were formerly within certain ancient biblical tribal areas. While John Brown provides the broad vision and goals for Zion, the actions taken by the Zion management, as it actively explores for oil and gas in Israel, are based on modern science and good business practice. Zion's oil and gas exploration activities are supported by appropriate geological and other science based studies and surveys typically carried out by companies engaged in oil and gas exploration activities.

The Rights Offering Summary

The Rights Offering

We are distributing to you, at no charge, non-transferable subscription rights to purchase Units of our securities. You will receive 0.18 of a subscription right (i.e., EIGHTEEN subscription rights for each ONE HUNDRED shares) for each share of common stock that you owned on September 28, 2010.

Subscription Privilege

Each whole subscription right entitles you to purchase one Unit at the subscription price of \$5.00 per Unit. Each Unit is comprised of (i) one (1) share of our Common Stock and (ii) one (1) Warrant to purchase one (1) additional share of our Common Stock at \$4.00. The Warrant is exercisable for a two (2) year period beginning on the closing date after the expiration of the rights offering until 5:00 p.m., Eastern Standard time, on the second anniversary thereof and, if such expiration date falls on a day other than a trading day, on the immediately preceding trading day.

Subscription rights may only be exercised for whole numbers of Units; no fractional Units will be issued in this offering. No fractional subscription rights will be issued. Instead, the number of subscription rights will be rounded down to the next lowest whole number.

Units offered by us in this rights offering

We are offering Units comprised of an aggregate of 3,820,391 shares of Common Stock and Warrants to purchase an additional 3,820,391 shares of Common Stock. This figure excludes shares of Common Stock issuable upon exercise of Warrants, if any.

Common stock outstanding before this rights offering

21,224,397 shares. This figure excludes shares of Common Stock issuable upon exercise of outstanding warrants and options convertible into or exercisable for shares of Common Stock.

exercised)

Common stock to be outstanding immediately after this 25,044,788 shares. This figure excludes shares of Common rights offering (assuming all rights to purchase Units are Stock issuable upon exercise, if any, of the Warrants and shares of common stock issuable upon exercise of other outstanding warrants and options convertible into or exercisable for shares of our common stock.

Record Date

5:00 p.m., Eastern Daylight Time, on September 28, 2010.

Commencement Date of Subscription Period

5:00 p.m., Eastern Daylight Time, on October 4, 2010.

Expiration Date

5:00 p.m., Eastern Standard Time, on November 15, 2010, unless extended by us, in our sole discretion. Any rights not exercised on or before the expiration date will expire without any payment to the holders of those unexercised rights.

Subscription Price Per Unit

\$5.00 per Unit, payable in immediately available funds. To be effective, any payment related to the exercise of the subscription right must clear prior to the expiration of the rights offering.

Oversubscription Rights

Use of proceeds

We do not expect that all of our stockholders will exercise all of their basic subscription rights. If you fully exercise your basic subscription right, your oversubscription right entitles you to subscribe for additional Units unclaimed by other rights holders in this offering at the same subscription price per Unit. If there are not enough Units available to satisfy all of the properly exercised oversubscription rights requests, then the available Units will be prorated among those who properly exercised oversubscription rights based on the number of Units each rights holder subscribed for under the basic subscription right.

We will return any excess payments without interest or deduction promptly after the expiration of the subscription period

We intend to use the net proceeds from sale of the Units under this offering for (i) furthering our oil and gas exploration program, (ii) implementing our plans to establish a majority owned drilling subsidiary for the purposes of purchasing and operating the drilling rig we currently use in our drilling program and (iii) general corporate purposes. See "Use of Proceeds" on page S-20. Any net proceeds we may receive from the exercise of Warrants, if any, will also be applied accordingly.

Non-transferability of Subscription Rights

The subscription rights may not be sold, transferred or assigned and will not be listed for trading on the NASDAQ

Global Market or on any other stock exchange or market.

Transferability of the Warrants

The Warrants to be issued pursuant to this offering will be separately transferable following their issuance and through their expiration date. The Warrants are not currently trading on any market. We have filed an application with NASDAQ to list the Warrants on the NASDAQ Global Market. If our application is accepted, the symbol "ZNWAZ" has been reserved to designate the Warrants.

No Revocation

If you exercise any of your subscription rights, you will not be permitted to revoke or change the exercise or request a refund of monies paid.

Extension and Cancellation

Extension. We may extend the expiration date for exercising your subscription rights in our sole discretion. Any extension of this offering will be followed as promptly as practicable by an announcement, and in no event later than 9:00 a.m., Eastern Standard time, on the next business day following the previously scheduled expiration date.

Cancellation. We may cancel the rights offering at any time and for any reason prior to the expiration date. Any cancellation of this offering will be followed as promptly as practicable by announcement thereof, and in no event later than 9:00 a.m., Eastern Standard time, on the next business day following the cancellation. In the event that we cancel this rights offering, all subscription payments will be returned, without interest or deduction, as soon as practicable.

Trading Symbols

Common Stock. Our common stock is quoted on the NASDAQ Global Market under the symbol "ZN." The shares of Common Stock included in the Unit and to be issued in this rights offering and pursuant to the terms of the Warrants will also be quoted on the NASDAQ Global Market under the symbol "ZN"

Subscription Rights. The subscription rights are not transferable either during or after the subscription period.

Warrants. The Warrants included in the Units and to be issued pursuant to this offering will be separately transferable upon issuance and through their expiration date. The Warrants are not currently trading on any market. We have filed an application with NASDAQ to list the Warrants on the NASDAQ Global Market. If our application is accepted, the symbol "ZNWAZ" has been reserved to designate the Warrants.

U.S. Federal Income Tax Considerations

Generally, a holder should not recognize income or loss for United States federal income tax purposes in connection with the receipt or exercise of subscription rights in the rights offering. However, you should consult your tax advisor as to the particular consequences to you of the rights offering. For a detailed discussion, see "Federal Income Tax Considerations."

QUESTIONS AND ANSWERS ABOUT THE RIGHTS OFFERING

What is a rights offering?

A rights offering is ordinarily a distribution of subscription rights to a company's existing shareholders to buy a proportional number of additional securities at a given price (usually at a discount) within a fixed period. A rights offering is an opportunity for you to purchase securities at a fixed price and in an amount at least proportional to your existing interest, which enables you to maintain, and possibly increase, your current percentage ownership.

Why are we engaging in a rights offering?

The purpose of this rights offering is to raise equity capital in a cost-effective manner that gives all of our stockholders the opportunity to participate. The net proceeds from the sale of Units will be used to further our oil and gas exploration program and allow us to continue drilling further explorations wells on our license areas and hopefully to reach the deep Permian geological layer where we believe significant hydrocarbon deposits exist. In addition, depending on the amounts we raise from the offering and ultimately from the exercises of the Warrants, if any, we intend to use the proceeds to implement our plans detailed in the Memorandum of Understanding entered into with Aladdin Middle East Ltd. ("Aladdin") in April 2010 pursuant to which we plan to gain control of the use of Aladdin's 2,000 horsepower drilling rig in Israel. As oil and gas exploration onshore Israel is not a highly developed industry, there is a lack of suitable equipment such as a drilling rig available in Israel. Our business requires use of a drilling rig that can drill wells to depths of up to 20,000 feet. By purchasing a 51% interest in a new company (tentatively named by us Zion Drilling, Inc.) which will then purchase and own a 2,000 horsepower drilling rig, we will secure, on a permanent basis, vital equipment with which to drill further exploration wells. The planned subsidiary is to purchase Aladdin's drilling rig for an initial payment of \$ 7 million and a series of \$1 million additional payments that are anticipated to coincide with our planned drilling of seven additional wells in Israel during the next few years. As the funds for the purchase of the rig are to be provided by us, we need to raise additional funds. Our plans with Aladdin are subject to a number of events, including satisfactory completion of due diligence, the raising of additional capital and the negotiation and execution of definitive agreements relating to the establishment of Zion Drilling, Inc. Finally, this rights offering will also help us to fund general corporate expenditures, necessary for the good administration of our business. See "Use of Proceeds."

What is the basic subscription right?

You will receive 0.18 of a subscription right (i.e., EIGHTEEN subscription rights for each ONE HUNDRED shares) for each share of common stock that you owned on September 28, 2010. Each whole basic subscription right entitles you to purchase one Unit at a per Unit subscription price of \$5.00. Each Unit is comprised of (i) one (1) share of our Common Stock and (ii) one (1) Warrant to purchase one (1) additional share of our Common Stock at \$4.00. The Warrant is exercisable for a two (2) year period beginning on the closing date after the expiration of the rights offering. The Warrants included in the Units are separately transferable following their issuance and through their expiration date. The Warrants are not currently trading on any market. We have filed an application with NASDAQ to list the Warrants on the NASDAQ Global Market. If our application is accepted, the symbol "ZNWAZ" has been reserved to designate the Warrants.

You may exercise any number of your subscription rights, or you may choose not to exercise any subscription rights. You will not receive any fractional rights; instead the number of subscription rights you receive will be rounded down to the next lowest whole number.

What is the over-subscription right?

We do not expect all of the basic subscription rights to be exercised. The over-subscription right provides shareholders that exercise all of their basic subscription rights the opportunity to purchase Units that are not purchased by other shareholders. If you fully exercise your basic subscription right, the over-subscription right entitles you to subscribe for additional Units unclaimed by other holders of rights in this offering at the same subscription price per Unit. If an insufficient number of Units are available to fully satisfy all over-subscription right requests, then the available Units will be distributed proportionately among rights holders who exercise their over-subscription right based on the number of Units each rights holder subscribed for under the basic subscription right. We will return any excess payments by mail without interest or deduction promptly after the expiration of the subscription period.

Will the shares of Common Stock and Warrants that I receive upon exercise of my subscription rights be tradable on the NASDAQ Global Market?

Our common stock is currently traded on the NASDAQ Global Market under the symbol "ZN". The subscription rights are non-transferable and will not be traded. The Common Stock included in the Units will be immediately tradable upon issuance and will be listed for quotation on the NASDAQ Global Market under the symbol "ZN". The Warrants included in the Units will be separately transferable following their issuance. The Warrants will be immediately exercisable upon issuance through 5:00 p.m., Eastern Standard time, on the second anniversary date thereof and, if such expiration date falls on a day other than a trading day, on the immediately preceding trading day. The shares of Common Stock issuable upon exercise of the Warrants will be immediately tradable upon issuance and will be listed for quotation on the NASDAQ Global Market under the symbol "ZN", assuming that the registration statement of which this Prospectus forms a part remains effective, and that our Common Stock is still listed on the NASDAQ Global Market, at that time. The Warrants are exercisable at a per share purchase price of \$4.00. The Warrants are not currently trading on any market. We have filed an application with NASDAQ to list the Warrants on the NASDAQ Global Market. If our application is accepted, the symbol "ZNWAZ" has been reserved to designate the Warrants.

Who may participate in this offering?

Only holders of record of our common stock as of September 28, 2010 are entitled to participate in this offering.

Am I required to subscribe in this offering?

No. However, shareholders who choose not to exercise their rights will experience dilution to their equity interest in our company.

How long will the rights offering last?

You will be able to exercise your subscription rights only during a limited period. To exercise a subscription right, you must do so by 5:00 p.m., Eastern Standard Time, on November 15, 2010, unless we extend the rights offering. We may, in our sole discretion, extend the offering on one or more occasions, for any reason. Accordingly, if a rights holder desires to exercise its subscription rights, we must actually receive all required documents and payments for that rights holder before the expiration date and time. If we elect to extend the scheduled termination date, we will issue a press release announcing such decision no later than 9:00 a.m., Eastern Standard Time, on the next business day after the decision has been taken.

May the Board of Directors cancel or terminate the rights offering?

Yes. Our board of directors may decide to cancel or terminate the rights offering at any time and for any reason before the expiration date. If our board of directors cancels or terminates the rights offering, we will issue a press release notifying shareholders of the cancellation or termination, and any money received from subscribing holders of rights will be returned as soon as practicable, without interest or deduction.

May I transfer, sell or give away my subscription rights?

No. Should you choose not to exercise your subscription rights, you may not sell, give away or otherwise transfer your rights. However, subscription rights will be transferable to affiliates of the recipient and by operation of law, for example, upon death of the recipient.

How many Units may I purchase?

You will receive 0.18 of a subscription right (i.e. EIGHTEEN subscription rights for each ONE HUNDRED shares) for each share of common stock that you owned as a holder of record on September 28, 2010. Each whole subscription right entitles you to purchase one (1) Unit at a per Unit subscription price of \$5.00. Each Unit is comprised of (i) one (1) share of our Common Stock and (ii) one (1) Warrant to purchase one (1) additional share of our Common Stock at \$4.00. The Warrant is exercisable for a two (2) year period beginning on the closing date after the expiration of the rights offering. We will not distribute fractional subscription rights, but will round down the number of subscription rights you are to receive to the next lowest whole number.

If you fully exercise all of your basic subscription rights, your over-subscription rights entitle you to subscribe for additional Units unclaimed by other holders of rights in this offering at the same subscription price per Unit. If an insufficient number of Units are available to fully satisfy all properly exercised over-subscription right requests, then the available Units will be prorated among those who properly exercised over-subscription right based on the number of Units each rights holder subscribed for under the basic subscription right pursuant to the allocation procedures described below in "THE RIGHTS OFFERING-THE SUBSCRIPTION RIGHTS-OVER SUBSCRIPTION RIGHT."

How do I exercise my subscription rights?

You may exercise your subscription rights by properly completing and signing your subscription form and delivering it, with full payment of the \$5.00 subscription price each Unit you are subscribing for, including any over-subscription right, to us on or prior to 5:00 pm Eastern Standard Time, on November 15, 2010. If you use the mail, we recommend that you use insured, registered mail, return receipt requested. If you cannot deliver your subscription agreement to us on time, you may follow the guaranteed delivery procedures described under "The Offering - Guaranteed Delivery Procedures."

Is exercising my subscription rights risky?

The exercise of your subscription rights involves risks. Exercising your subscription rights means buying additional shares of our common stock and warrants to purchase additional shares of our common stock and should be considered as carefully as you would consider any other equity investment. Among other things, you should carefully consider the risks described under the heading "RISK FACTORS," beginning on page S-12.

After I exercise my subscription rights, may I change my mind and cancel my purchase?

No. Once you send in your subscription agreement and payment, you cannot revoke the exercise of your subscription rights, even if you later learn information about us that you consider to be unfavorable and even if the market price of our common stock is below the \$5.00 Unit purchase price or the \$4.00 Warrant exercise price. You should not exercise your subscription rights unless you are certain that you wish to purchase additional shares of our Common Stock and Warrants at a price of \$5.00 per Unit.

What happens if I choose not to exercise my subscription rights?

You will retain your current number of shares of common stock even if you do not exercise your subscription rights. However, if other shareholders exercise their subscription rights and you do not, the percentage of our company that you own will diminish and your voting and other rights will be diluted. Your rights will expire and have no value if they are not exercised by the expiration date.

Will I be charged any fees if I exercise my rights?

We will not charge a fee to holders for exercising their rights. However, any holder exercising its rights through a broker, dealer or nominee will be responsible for any fees charged by its broker, dealer or nominee.

If I exercise my rights, when will I receive the securities for which I have subscribed?

We will issue the certificates representing the shares of Common Stock and the instruments evidencing the related Warrants for which subscriptions have been properly received as soon as practicable after the expiration date of this rights offering, whether or not you exercise your subscription rights immediately prior to that date or earlier. We will not be issuing any certificate evidencing the Units being subscribed for. Upon issuance, the shares of Common Stock and the Warrants in the Units are detachable. The Warrants are not currently trading on any market. We have filed an application with NASDAQ to list the Warrants on the NASDAQ Global Market. If our application is accepted, the symbol "ZNWAZ" has been reserved to designate the Warrants.

What if my shares are not held in my name?

If you hold your shares of our common stock in the name of a broker, dealer or other nominee, then your broker, dealer or other nominee is the record holder of the shares you own. The record holder must exercise the rights on your behalf for the Units you wish to purchase. Therefore, you will need to have your record holder act for you.

If you wish to participate in this rights offering and purchase Units at the per Unit subscription price of \$5.00, please promptly contact the record holder of your shares. We will ask your broker, dealer or other nominee to notify you of this rights offering. You should complete and return to your record holder the form entitled "Beneficial Owner Election Form." You should receive this form from your record holder with the other rights offering materials. If you hold your shares through a brokerage account, you should note that most brokerages permit the beneficial owner to exercise their rights on one occasion only. Accordingly, if you plan to exercise your over-subscription right, you should do so at the time that you submit your subscription to your broker.

How did we arrive at the \$5.00 per Unit subscription price?

Our board of directors determined that the per Unit subscription price should be designed to provide an incentive to our current stockholders to exercise their rights in the rights offering. Other factors considered in setting the subscription price included the amount of proceeds desired, our need for equity capital, the historic and current market price of our common stock, the historic volatility of the market price of our common stock, our business prospects, alternatives available to us for raising equity capital, and the liquidity of our common stock. The subscription price of the Unit does not necessarily bear any relationship to our past operations, cash flows, book value, current financial condition, or any other established criteria for value. You should not consider the subscription price as an indication of the value of Zion Oil & Gas or our common stock.

How much money will we receive from the rights offering?

If we sell all the Units being offered, we will receive gross proceeds of approximately \$19,100,000. After deduction of \$150,000 in estimated expenses, we will have net proceeds of approximately \$18,950,000. These amounts do not include the proceeds, if any, from the exercises of any of the Warrants included in the Units. We are offering Units in the rights offering with no minimum purchase requirement. As a result, there is no assurance we will be able to sell all or any of the Units being offered, and it is not likely that all of our shareholders will purchase all the Units offered in the rights offering.

If all of the Warrants included in the Units are subsequently exercised, of which no assurance can be provided, then we will received additional gross proceeds of \$15,281,564 from these Warrant exercises, before deducting for any warrant exercise related expenses we may incur.

What are the United States federal income tax consequences to me of exercising my subscription rights?

The receipt and exercise of your subscription rights are intended to be nontaxable events for U.S. shareholders. However, you should seek specific tax advice from your personal certified public accountant or tax attorney. See "FEDERAL INCOME TAX CONSIDERATIONS-TAXATON OF OUR SHAREHOLDERS."

Has the board of directors made a recommendation as to whether I should sell or exercise my rights?

No. Neither we nor our board of directors has made any recommendation as to whether you should exercise your rights for the Units or whether you should exercise any of the Warrants included in the Units (assuming you purchase any Units). You should decide whether to subscribe for Units, or simply take no action with respect to your rights,

based upon your own assessment of your best interests.

What if I have other questions?

If you have other questions about the rights offering, please contact our Dallas office, by telephone at (888) 891-9466 or (214) 221-4610.

GOING CONCERN CONSIDERATIONS

We are a development stage company with limited capital resources, no revenue and a loss from operations. We incurred net losses of \$4,424,000, \$4,018,000 and \$13,047,000 for the years ended December 31, 2009, 2008 and 2007, respectively. We have incurred significant losses since our inception on April 6, 2000, and our accumulated deficit as of June 30, 2010 was \$53,715,000. This amount includes a non-cash impairment charge of \$22,022,000 to our unproved oil and gas properties for the quarter ending June 30, 2010 in respect of the suspension of operations at the Ma'anit-Rehoboth #2 well following our determination in April 2010 that the well was currently incapable of producing oil and/or gas in commercial quantities. We cannot assure you that we will not have to record additional impairment charges or that we will ever be profitable. These factors have raised substantial doubt about our ability to continue as a going concern. See "RISK FACTORS on page S-12 relating to our ability to continue as a 'going concern' and our need to raise additional funds to realize our business plans.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus and the documents included or incorporated by reference in this prospectus contain statements concerning our expectations, beliefs, plans, objectives, goals, strategies, future events or performance and underlying assumptions and other statements that are not historical facts. These statements are "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995. You generally can identify our forward-looking statements by the words "anticipate," "believe," "budgeted," "continue," "could," "estimate," "expect," "forecast," "goal," "intend," "may," "objective," "plan," "potential," "predict," "projection," "scheduled," "should," "will" or other similar words. These forward-looking statements include, among others, statements regarding:

- our growth strategies;
- * our ability to explore for and develop natural gas and oil resources successfully and economically;
- *our estimates of the timing and number of wells we expect to drill, other exploration activities and the cost of those activities:
- *The funding for and implementation of our plans relating to the establishment of a majority owned drilling subsidiary and the purchase and operation by such subsidiary of the drilling rig currently being used to drill our Ma'anit-Joseph #3 well;
 - * anticipated trends in our business;
 - * our future results of operations;
 - * our liquidity and our ability to raise capital to finance our exploration and development activities;
 - * our capital expenditure program;
- *whether our shares or publicly traded warrants would continue to meet the eligibility requirements for continued listing on the NASDAQ Global Market;
 - * future market conditions in the oil and gas industry; and
 - * the impact of governmental regulation.

More specifically, our forward-looking statements include, among others, statements relating to our schedule, business plan, targets, estimates or results of future drilling, including the number, timing and results of wells, the timing and risk involved in drilling follow-up wells, planned expenditures, prospects budgeted and other future capital expenditures, risk profile of oil and gas exploration, acquisition of seismic data (including number, timing and size of projects), planned evaluation of prospects, probability of prospects having oil and natural gas, expected production or reserves, increases in reserves, acreage, working capital requirements, hedging activities, the ability of expected sources of liquidity to implement our business strategy, future hiring, future exploration activity, production rates, all and any other statements regarding future operations, financial results, business plans and cash needs and other statements that are not historical facts.

Such statements involve risks and uncertainties, including, but not limited to, those relating to our dependence on our exploratory drilling activities, the volatility of oil and natural gas prices, operating risks of oil and natural gas

operations, our dependence on our key personnel, factors that affect our ability to manage our growth and achieve our business strategy, risks relating to our limited operating history, technological changes, our significant capital requirements, the potential impact of government regulations, adverse regulatory determinations, litigation, competition, the uncertainty of reserve information and future net revenue estimates, property acquisition risks, industry partner issues, availability of equipment, weather and other factors detailed herein and in our other filings with the SEC.

We have based our forward-looking statements on our management's beliefs and assumptions based on information available to our management at the time the statements are made. We caution you that assumptions, beliefs, expectations, intentions and projections about future events may and often do vary materially from actual results. Therefore, we cannot assure you that actual results will not differ materially from those expressed or implied by our forward-looking statements.

Some of the factors that could cause actual results to differ from those expressed or implied in forward-looking statements are described under "Risk Factors" in this prospectus and described under "Risk Factors" and elsewhere in our Annual Report on Form 10-K for the fiscal year ended December 31, 2008 and 2009 and in our other periodic reports filed with the SEC. Should one or more of these risks or uncertainties materialize, or should underlying assumptions prove incorrect, actual outcomes may vary materially from those indicated. All subsequent written and oral forward-looking statements attributable to us or persons acting on our behalf are expressly qualified in their entirety by reference to these risks and uncertainties. You should not place undue reliance on our forward-looking statements. Each forward-looking statement speaks only as of the date of the particular statement, and we undertake no duty to update any forward-looking statement.

RISK FACTORS

You should carefully consider the risks described below before making a decision to buy our securities. Investing in our securities involves a number of risks. If any of the following risks actually occurs, our business, financial condition and results of operations could be harmed. In that case, the trading price of our securities could decline and you might lose all or part of your investment. Before you decide to buy our securities, you should carefully consider the risk factors set forth below and those that may be included in any applicable prospectus supplement. Risks and uncertainties not presently known to us or that we currently deem immaterial may also affect our business operations.

Risks Related to Our Business

We are an exploration stage company with no current source of income and, consequently, our financial condition has been unsound in the past and might again be so in the future.

We were incorporated in April 2000 and are still an exploration stage company. Our operations are subject to all of the risks inherent in exploration stage companies with no revenues or operating income. Our potential for success must be considered in light of the problems, expenses, difficulties, complications and delays frequently encountered in connection with a new business, especially the oil and gas exploration business. We cannot warrant or provide any assurance that our business objectives will be accomplished. All of our audited financial statements since inception have contained a statement by management and by the auditors that raise substantial doubt about us being able to continue as a "going concern" unless we are able to raise additional capital.

We will require substantial additional funds to drill additional wells and to fully fund our planned drilling subsidiary company.

Our planned work program is expensive. We will need to raise substantial additional capital beyond the amounts that we can raise from the sale of Units under this Rights Offering in order to continue our drilling operations and in order to fully fund our planned drilling subsidiary company, tentatively named by us Zion Drilling, Inc., which will allow us the control of the drilling rig that we are currently using and which is owned by Aladdin for our future wells. We have no commitments for any financing and no assurance can be provided that we will be able to raise funds when needed. If we do not raise funds from this offering, our management anticipates that it will have sufficient funds for our activities only through December 2010. We estimate that, when we are not actively drilling a well, our monthly expenditure is approximately \$250,000 per month. However, when we are engaged in active drilling operations, we estimate that there is an additional cost of approximately \$75,000 per day (equivalent to approximately \$2,250,000 per month). We are currently drilling the Ma'anit-Joseph #3 well. The recent and continuing turmoil in the credit and equity markets may adversely affect our ability to raise the needed funds from this offering or from alternative sources.

If we receive subscriptions for all of the Units available under this rights offering, we will have received net proceeds of approximately \$18,950,000. These amounts will allow us to continue our planned drilling program through the end of the second quarter of 2011 as described under "Use of Proceeds" on Page S-20 and to implement the initial planned payment of to Aladdin of \$7 million in respect of the rig purchase, assuming that we have entered into definitive agreements with Aladdin. Accordingly, unless we receive in a timely manner significant additional amounts from the exercise of the Warrants issued under this Offering, of which no assurance can be provided, then, we will need to raise additional funds from alternative sources.

In any event, any additional financing could cause your relative interest in our assets and potential earnings to be significantly diluted. Even if we have exploration success, we may not be able to generate sufficient revenues to offset the cost of dry holes and general and administrative expenses.

The plans contemplated in the Memorandum of Understanding with Aladdin are subject to many conditions, many of which are not in our control.

The plans contemplated in the Memorandum of Understanding that we and Aladdin entered into in April 2010, relating to the establishment of a subsidiary, which would be 51% owned by us and 49% owned by Aladdin, for the purpose of purchasing Aladdin's 2,000 horsepower drilling rig (which is currently being used to drill the Ma'anit-Joseph #3 well) are subject to a number of contingencies. These include (without limitation) satisfactory completion of due diligence by us and Aladdin, the negotiation and execution of definitive agreements and the raising of additional funds beyond the maximum amounts which can be raised from this offering. The planned subsidiary is to purchase Aladdin's drilling rig for an initial payment of \$7 million and a series of \$1 million additional payments that are anticipated to coincide with our planned drilling of seven additional wells in Israel during the next few years.

Even it we are able to raise the funds needed to implement our plans, we cannot provide any assurance that we and Aladdin will successfully negotiate and conclude definitive agreements relating to the establishment of the subsidiary, the purchase by such subsidiary of the rig and other related matters. Even if we are able to conclude definitive and legally binding agreements, we cannot determine the effect, if any, of a default by us of any of the operative terms of this agreement and how any such default would affect our drilling operations. If any of these or other unfavorable and unforeseen circumstances were to arise, then these developments could materially and adversely affect our business, results of operations and financial condition.

Finally, by its terms, the Memorandum of Understanding is scheduled to terminate on December 31, 2010. We have not approached Aladdin regarding an extension of the scheduled expiration date beyond December 31, 2010 and no assurance can be provided that we would be successful in extending the expiration date, should it be necessary.

We rely on independent experts and technical or operational service providers over whom we may have limited control.

The success of our oil and gas exploration efforts is dependent upon the efforts of various third parties that we do not control. These third parties provide critical engineering, geological, geophysical and other scientific analytical services, including 2-D seismic imaging technology to explore for and develop oil and gas prospects. Given our small size and limited resources, we do not have all the required expertise on staff. As a result, we rely upon various companies and other third persons to assist us in identifying desirable hydrocarbon prospects to acquire and to provide us with technical assistance and services. In addition, we rely upon the owners and operators of drilling rigs and related equipment. The drilling rig which we are currently using to drill the Ma'anit-Joseph #3 well and which we used to drill most of our previous exploratory wells is owned and operated by Aladdin.

Although we have developed relationships with Aladdin and with a number of other third-party service providers, we cannot provide assurance that we will be able to continue to rely on such persons. If any of these relationships with third-party service providers are terminated or are unavailable on commercially acceptable terms, we may not be able to execute our business plan. Our limited control over the activities and business practices of these third parties, any inability on our part to maintain satisfactory commercial relationships with them, their limited availability or their failure to provide quality services could materially and adversely affect our business, results of operations and financial condition.

We typically commence exploration drilling operations without undertaking extensive analytical testing thereby potentially increasing the risk (and associated costs) of drilling a non-producing well.

Larger oil and gas exploration companies typically conduct extensive analytical pre drilling testing. These include 3-D seismic imaging, the drilling of an expendable "pilot" well or "stratigraphic test" to collect data (logs, cores, fluid samples, pressure data) to determine if drilling a well capable of producing oil or gas well (full completion with casing and well testing) is justified. The use of pilot or stratigraphic tests is often used in areas where there is little or no offset well data, like Northern Israel, where our exploration license and permits areas are located. While 3-D seismic imaging data is more useful than 2-D data in identifying potential new drilling prospect, its acquisition and processing costs are many multiples greater than that for 2-D data. In addition to using 2-D seismic technology prior to drilling, we have historically also utilized gravity and magnetic data, built cross section maps from offset wells and utilized geophysical analysis from similar geologic targets. We believe that the additional months, delays and associated costs associated with more extensive pre-drilling testing typically undertaken by larger oil and gas exploration companies is not justified when drilling vertical exploration wells (as we have historically been doing). Nonetheless, the absence of more extensive pre-drilling testing may potentially increase the risk of drilling a non-producing well, which would in turn result in increased costs and expenses.

A substantial and extended decline in oil or natural gas prices could adversely impact our future rate of growth and the carrying value of our unproved oil & gas assets.

Prices for oil and natural gas fluctuate widely. Fluctuations in the prices of oil and natural gas will affect many aspects of our business, including our ability to attract capital to finance our operations, our cost of capital, and the value of our unproved oil and natural gas properties. Prices for oil and natural gas may fluctuate widely in response to relatively minor changes in the supply of and demand for oil and natural gas, market uncertainty and a wide variety of additional factors that are beyond our control, such as the domestic and foreign supply of oil and natural gas, the

ability of members of the Organization of Petroleum Exporting Countries to agree to and maintain oil price and production controls, technological advances affecting energy consumption, and domestic and foreign governmental regulations. Significant and extended reductions in oil and natural gas prices could require us to reduce our capital expenditures and impair the carrying value of our assets.

If we are successful in finding commercial quantities of oil and/or gas, our revenues, operating results, financial condition and ability to borrow funds or obtain additional capital will depend substantially on prevailing prices for oil and natural gas. Declines in oil and gas prices may materially adversely affect our financial condition, liquidity, ability to obtain financing and operating results. Lower oil and gas prices also may reduce the amount of oil and gas that we could produce economically.

Historically, oil and gas prices and markets have been volatile, with prices fluctuating widely, and they are likely to continue to be volatile, making it impossible to predict with any certainty the future prices of oil and gas.

We may continue to recognize substantial write-downs with respect to well impairment costs.

We account for our oil and gas property costs using the full-cost method of accounting for oil and gas properties. Accordingly, all costs associated with acquisition, exploration and development of oil and gas reserves, including directly related overhead costs, are capitalized. We record an investment impairment charge when we believe an investment has experienced a decline in value that is other than temporary.

We drilled the Ma'anit-Rehoboth #2 well to a depth of 17,913 feet (5,460 meters). Our testing procedures conclusively determined in April 2010 that the well was currently incapable of producing oil and/or gas in commercial quantities, so we temporarily suspended operations on the well and have recorded a non-cash impairment charge of \$22,022,000 to our unproved oil and gas properties for the quarter ending June 30, 2010.

As of the end of January 2010, we drilled the Elijah #3 well to a depth of 10,938 feet (3,334 meters). However, certain drill pipe became stuck in the well and the well has been temporarily suspended pending acquisition of further field seismic data and further analysis on how best to proceed.

Abandonment of properties is accounted for as adjustments to capitalized costs. The net capitalized costs are subject to a "ceiling test," which limits such costs to the aggregate of the estimated present value of future net revenues from proved reserves discounted at ten percent based on current economic and operating conditions, plus the lower of cost or fair market value of unproved properties. The recoverability of amounts capitalized for oil and gas properties is dependent upon the identification of economically recoverable reserves, together with obtaining the necessary financing to exploit such reserves and the achievement of profitable operations.

We review our unproved oil and gas properties periodically to determine whether they have been impaired. An impairment allowance is provided on an unproved property when we determine that the property will not be developed. Any impairment charge incurred is recorded in accumulated depletion, impairment and amortization to reduce our recorded basis in the asset.

We have no proved reserves or current production and we may never have any.

We do not have any proved reserves or current production of oil or gas. We cannot assure you that any wells will be completed or produce oil or gas in commercially profitable quantities.

We have a history of losses and we and we cannot assure you that we will ever be profitable.

We incurred net losses of \$4,424,000, \$4,018,000 and \$13,047,000 for the years ended December 31, 2009, 2008 and 2007, respectively. The loss for the year ended December 31, 2007 included an impairment charge of \$9,494,000 to our unproved oil and gas properties. Our accumulated deficit as of June 30, 2010 was \$53,715,000. This amount includes a non-cash impairment charge of \$22,022,000 to our unproved oil and gas properties in our unaudited statements of operations for the quarter ending June 30, 2010. We also reported a net loss of \$23,526,000 for the three months ended June 30, 2010 which includes the above referenced impairment charge. We cannot assure that we will ever be profitable.

Oil and gas exploration is an inherently risky business.

Exploratory drilling involves enormous risks, including the risk that no commercially productive oil or natural gas reservoirs will be discovered. Even when properly used and interpreted, seismic data analysis and other computer simulation techniques are only tools used to assist geoscientists in trying to identify subsurface structures and hydrocarbon indicators. They do not allow the interpreter to know conclusively if hydrocarbons are present or economically available. The risk analysis techniques we use in evaluating potential drilling sites rely on subjective judgments of our personnel and consultants.

Operating hazards and uninsured risks with respect to the oil and gas operations may have material adverse effects on our operations.

Our exploration and, if successful, development and production operations are subject to all of the risks normally incident to the exploration for and the development and production of oil and gas, including blowouts, cratering, uncontrollable flows of oil, gas or well fluids, fires, pollution and other environmental and operating risks. These hazards could result in substantial losses due to injury or loss of life, severe damage to or destruction of property and equipment, pollution and other environmental damage and suspension of operations. While as a matter of practice we take out insurance against some or all of these risks, such insurance may not cover the particular hazard and may not be sufficient to cover all losses. The occurrence of a significant event adversely affecting any of the oil and gas properties in which we have an interest could have a material adverse affect on us, could materially affect our continued operation and could expose us to material liability.

Political risks may adversely affect our operations and/or inhibit our ability to raise capital.

Our operations are concentrated in Israel and could be directly affected by political, economic and military conditions in Israel. Efforts to secure a lasting peace between Israel and its Arab neighbors and Palestinian residents have been underway since the State of Israel was established in 1948, and the future of these peace efforts is still uncertain.

Kibbutz Ma'anit (where we drilled our first well and the Ma'anit-Rehoboth #2 well and are drilling the Ma'anit-Joseph #3 well) is in an area adjacent to Israeli Arab towns where anti-Israeli rioting broke out in late 2000. On December 27, 2008, Israel began a military offensive against the Hamas terrorist organization infrastructure based in Gaza. (Gaza is in the South and our license areas are in the north of Israel.) Currently, a cease-fire is in effect. Any future armed conflict, political instability or continued violence in the region could have a negative effect on our operations and business conditions in Israel, as well as our ability to raise additional capital necessary for completion of our exploration program.

Economic risks may adversely affect our operations and/or inhibit our ability to raise additional capital.

Economically, our operations in Israel may be subject to:

- exchange rate fluctuations;
- •royalty and tax increases and other risks arising out of Israeli State sovereignty over the mineral rights in Israel and its taxing authority; and
 - changes in Israel's economy that could cause the legislation of oil and gas price controls.

Consequently, our operations may be substantially affected by local economic factors beyond our control, any of which could negatively affect our financial performance and prospects.

Legal risks could negatively affect our value.

Legally, our operations in Israel may be subject to:

- changes in the Petroleum Law resulting in modification of license and permit rights;
- adoption of new legislation relating to the terms and conditions pursuant to which operations in the energy sector may be conducted;
 - changes in laws and policies affecting operations of foreign-based companies in Israel; and
 - changes in governmental energy and environmental policies or the personnel administering them.

The Israeli Ministry of National Infrastructures is considering proposed legislation relating to licensing requirements for entities engaged in the fuel sector that, if adopted as currently proposed, may result in our having to obtain additional licenses to market and sell hydrocarbons that may be discovered by us. We have been advised by the Ministry that they do not intend to deprive a holder of petroleum rights under the Petroleum Law of its right under that law to sell hydrocarbons discovered and produced under its petroleum rights. We cannot now predict whether or in what form the proposed legislation may be adopted or, if adopted, its possible impact on our operations.

Further, in the event of a legal dispute in Israel, we may be subject to the exclusive jurisdiction of Israeli courts or we may not be successful in subjecting persons who are not United States residents to the jurisdiction of courts in the United States, either of which could adversely affect the outcome of a dispute.

The Ministry of Environmental Protection is considering proposed legislation relating to polluted materials, including their production, treatment, handling, storage and transportation, that may affect land or water resources. Persons engaged in activities involving these types of materials will be required to prepare environmental impact statements and remediation plans either prior to commencing activities or following the occurrence of an event that may cause

pollution to land or water resources or endanger public health. We do now know and cannot predict whether any legislation in this area will be enacted and, if so, in what form and which of its provisions, if any, will relate to and affect our activities, how and to what extent.

Our petroleum rights (including licenses and permits) could be canceled, terminated or not extended, and we would not be able to successfully execute our business plan.

Any license or other petroleum right we hold or may be granted is granted for a fixed period and requires compliance with a work program detailed in the license or other petroleum right. If we do not fulfill the relevant work program due to inadequate funding or for any other reason, the Israeli government may terminate the license or any other petroleum right before its scheduled expiration date. No assurance can be provided that, when required, we will be able to obtain extensions to either our licenses or our permit.

There are limitations on the transfer of interests in our petroleum rights, which could impair our ability to raise additional funds to execute our business plan.

The Israeli government has the right to approve any transfer of rights and interests in any license or other petroleum right we hold or may be granted and any mortgage of any license or other petroleum rights to borrow money. If we attempt to raise additional funds through borrowings or joint ventures with other companies and are unable to obtain required approvals from the government, the value of your investment could be significantly diluted or even lost.

Our dependence on the limited number of contractors, equipment and professional services available in Israel may result in increased costs and possibly material delays in our work schedule.

Due to the lack of competitive resources in Israel, costs for our operations may be more expensive than costs for similar operations in other parts of the world. We are also more likely to incur delays in our drilling schedule and be subject to a greater risk of failure in meeting our required work schedule. Similarly, some of the oil field personnel we need to undertake our planned operations are not necessarily available in Israel or available on short notice for work in Israel. Any or all of the factors specified above may result in increased costs and delays in the work schedule.

Our dependence on Israeli local licenses and permits may require more funds than we have budgeted and may cause delays in our work schedule.

In connection with drilling operations, we are subject to a number of Israeli local licenses and permits. Some of these are issued by the Israeli security forces, the Civil Aviation Authority, the Israeli Water Commission, the Israel Lands Authority, the holders of the surface rights in the lands on which we intend to conduct drilling operations, including Kibbutzim, local and regional planning commissions, and environmental authorities.

The surface rights to the drill site on which we are drilling the Ma'anit- Joseph #3 well are held under a long-term lease by Kibbutz Ma'anit. The rights are owned by the State of Israel and administered by the Israel Lands Authority. Permission has been granted to Zion by both Kibbutz Ma'anit and the Israel Lands Authority for the use of the surface rights.

The surface rights to the drill site of the Elijah #3 well are held under a long-term lease by Kibbutz Ein Carmel. The rights are owned by the State of Israel and administered by the Israel Lands Authority. Permission has been granted to Zion by both Kibbutz Ein Carmel and the Israel Lands Authority for the use of the surface rights.

In the event of a commercial discovery and depending on the nature of the discovery and the production and related distribution equipment necessary to produce and sell the discovered hydrocarbons, we will be subject to additional licenses and permits, including from various departments in the Ministry of National Infrastructures, regional and local planning commissions, the environmental authorities and the Israel Lands Authority. If we are unable to obtain some or all of these permits or the time required to obtain them is longer than anticipated, we may have to alter or delay our planned work schedule, which would increase our costs.

If we are successful in finding commercial quantities of oil and/or gas, our operations will be subject to laws and regulations relating to the generation, storage, handling, emission, transportation and discharge of materials into the environment, which can adversely affect the cost, manner or feasibility of our doing business. Many Israeli laws and regulations require permits for the operation of various facilities, and these permits are subject to revocation, modification and renewal. Governmental authorities have the power to enforce compliance with their regulations, and violations could subject us to fines, injunctions or both.

If compliance with environmental regulations is more expensive than anticipated, it could adversely impact the profitability of our business.

Risks of substantial costs and liabilities related to environmental compliance issues are inherent in oil and gas operations. It is possible that other developments, such as stricter environmental laws and regulations, and claims for damages to property or persons resulting from oil and gas exploration and production, would result in substantial costs and liabilities. This could also cause our insurance premiums to be significantly greater than anticipated.

Earnings will be diluted due to charitable contributions and key employee incentive plan.

We are committed to donating in the form of a royalty interest, 6% of our gross sales revenues, if any, to two charitable foundations. In addition, we may allocate 1.5% royalty interest or equivalent net operating profits interest to a key employee incentive plan designed as bonus compensation over and above our executive compensation payments. This means that the total royalty burden on our property (including the government royalty of 12.5%) may be up to 20%. As our expenses increase with respect to the amount of sales, these donations and allocation could significantly dilute future earnings and, thus, depress the price of the common stock.

The exercise of currently outstanding warrants and options may adversely affect the market price of our common stock.

In connection with our follow on public offering that we concluded in January 2009, we issued warrants to purchase up to 666,343 shares of our common stock at a per share exercise price of \$7.00, exercisable through January 31, 2012, of which 606,679 are outstanding as of the date of this prospectus. The shares underlying these warrants have been registered and, accordingly, any shares issued upon the exercise of these warrants, along with any shares of Common Stock issued upon exercise of the Warrants offered in this rights offering, will be immediately resalable on the open market. Additionally, we currently have stock options outstanding to purchase 406,168 shares of common stock at prices ranging between \$0.01 and \$8.25 per share.

Risks Related to this Rights Offering and our Stock

Your interest in our company may be diluted as a result of this rights offering.

Shareholders who do not fully exercise their subscription rights for the Units should expect that they will, at the completion of this offering, own a smaller proportional interest in our company than would otherwise be the case had they fully exercised their subscription rights. Further, the shares of Common Stock issuable upon the exercise of the Warrants included in the Units, if any, will further dilute the ownership interest of shareholders not participating in this offering.

Completion of this rights offering is not subject to us raising a minimum offering amount.

Completion of this offering is not subject to us raising a minimum offering amount and therefore proceeds may be insufficient to meet our objectives, thereby increasing the risk to investors in this offering, including investing in a company that continues to require capital.

This rights offering may cause the trading price of our common stock to decrease.

The per Unit subscription price, together with the number of shares of Common Stock we propose to issue and ultimately will issue if the subscription rights for all of the Units under this rights offering are exercised, may result in an immediate decrease in the market value of our common stock. This decrease may continue after the completion of this rights offering and such decrease in market value may be amplified to the extent that Warrant included in the Warrants are exercised. If that occurs, you may have committed to buy Units in the rights offering at a price greater than the underlying computed value (at the prevailing market price) of the shares of Common Stock and Warrants included in the Units. We cannot predict the effect, if any, that the availability of shares for future sale, represented by the shares of Common Stock and/or Warrants included in the Units issued in connection with the rights offering, will have on the market price of our common stock from time to time. Further, if a substantial number of subscription rights for Units are exercised and the holders of the purchased Units choose to sell some or all of the shares of Common Stock underlying the subscription rights or the Warrants, the resulting sales could depress the market price of our common stock. Following the exercise of your subscription rights you may not be able to sell your Common Stock and exercise your Warrants and sell that stock at a price equal to or greater than the \$5.00 subscription price of the Units or the \$4.00 exercise price of the Warrants.

Future sales of our common stock may adversely affect the prevailing market price for our common stock.

As of September 28, 2010, we are authorized to issue up to 50,000,000 shares of common stock, of which there were 21,224,397 shares of our common stock outstanding. An additional 1,516,679 shares of Common Stock have been reserved for issuance upon the exercise of outstanding warrants and options previously issued, including the warrants issued in connection with our follow-on public offering which terminated on January 9, 2009, but excluding the

Warrants included in this rights offering. The warrants for 606,679 shares of Common Stock that we issued in connection with our follow-on public offering are exercisable through January 2012 and, upon any such exercise of these warrants, we will issue freely tradable shares. As of September 28, 2010, we have issued 59,664 shares in respect of exercises of these warrants. The exercise of these warrants and/or the issuance of additional shares of our Common Stock in connection with the above or in connection with the Warrants included with this rights offering would dilute the interest in our company represented by each share of common stock and may adversely affect the prevailing market price of our common stock.

You could be committed to buying shares of common stock above the prevailing market price.

Once you exercise your subscription rights, you may not revoke the exercise. We cannot assure you that the public trading market price of our common stock will not decline after the exercise of your subscription rights for the Units. If you exercise your subscription rights for the Units and the market price of our common stock declines below \$4.00, then you will have committed to buy Units in the rights offering at a price that is higher than both the prevailing market price of the shares of our Common Stock and the exercise price of the Warrants. Moreover, we cannot assure you that you will ever be able to sell shares of Common Stock that you purchased in the rights offering at a price equal to or greater than the underlying per Unit subscription price of \$5.00 or the Warrant exercise price of \$4.00. Until the stock certificates and Warrant instruments underlying the Units purchased in the rights offering are delivered on the closing date after the expiration date of the rights offering, you will not be able to sell the shares of our Common Stock or exercise any of the Warrants included in the Units.

As of the date of this prospectus supplement, the Warrants included in the Units have not been approved for listing on the NASDAQ Global Market or on any other Exchange.

The Warrants included in the Units are not currently trading on any market or exchange. On September 28, 2010, we filed an application with the NASDAQ Stock Market to list the Warrants on the NASDAQ Global Market. If our application is accepted, the symbol "ZNWAZ" has been reserved to designate the Warrants. However, no assurance can be provided that the Warrants will in fact be listed for trading on the NASDAQ Global Market or any other market or exchange. The shares issuable upon exercise of the Warrants will be tradable on the NASDAQ Global Market. However, if for whatever reason the Warrants are not listed on the NASDAQ Global Market or any other exchange, then your ability to transfer or otherwise dispose of the Warrant will be materially impaired.

Our stock price and trading volume may be volatile, which could result in losses for our stockholders.

The equity trading markets have recently experienced high volatility resulting in highly variable and unpredictable pricing of equity securities. If the turmoil in the equity trading markets continues, the market for our common stock could change in ways that may or may not be related to our business, our industry or our operating performance and financial condition. In addition, the trading volume in our common stock may fluctuate and cause significant price variations to occur. Some of the factors that could negatively affect our share price or result in fluctuations in the price or trading volume of our common stock include:

- *actual or anticipated quarterly variations in our operating results, including further impairment to unproved oil and gas properties
 - * changes in expectations as to our future financial performance or changes in financial estimates, if any,
 - * announcements relating to our business,
 - * conditions generally affecting the oil and natural gas industry,
 - * the success of our operating strategy, and
 - * the operating and stock performance of other comparable companies.

Many of these factors are beyond our control, and we cannot predict their potential effects on the price of our Common Stock. During the past fifty-two weeks, our stock price has fluctuated from an intraday low (on July 16, 2010) of \$4.51 to an intraday high of \$10.95 (on October 14, 2009). High volatility has had a significant effect on the market price of securities issued by many companies for reasons unrelated to their operating performance and could have the same effect on our common stock.

No assurance can be provided that you will be able to resell your shares of Common Stock underlying the Units at or above the per Unit subscription price of \$5.00 or the warrant exercise price of \$4.00. We cannot assure you that the market price of Common Stock included in the Units you subscribe for will be equal to or greater than the per Unit subscription price of \$5.00 or that the shares of Common Stock issuable upon exercise of the Warrants will be equal to or greater than the Warrant exercise price of \$4.00 or that the market price of our common stock will not fluctuate or decline significantly.

You should not consider the subscription prices of our Units as an indication of the value of our company or our common stock.

Our board of directors set all of the terms and conditions of the rights offering, including the per Unit subscription price. The \$5.00 per Unit subscription price was based on several factors, including the book value of our common stock (which includes the value of our unproved oil and gas properties), the amount of proceeds desired, our need for equity capital, the need to provide an incentive to our current shareholders to exercise rights in the rights offering, the historic and current market price of our common stock, the historic volatility of the market price of our common stock, our business prospects and alternatives available to us for raising equity capital. The subscription price of \$5.00 per Unit does not necessarily bear any relationship to our past operations, cash flows, book value, current financial condition, or any other established criteria for value. You should not consider the subscription price as an indication of the value of our company or our common stock.

You will not be able to revoke the exercise of your subscription rights.

Once you exercise your subscription rights, you may not revoke the exercise. Therefore, even if circumstances arise after you have subscribed in the offering that cause you to change your mind about investing in the Units offered in this rights offering or the underlying Common Stock or Warrants, or if the offering is extended, you will nonetheless be legally bound to proceed with your investment.

You must act promptly and follow instructions carefully if you want to exercise your rights.

Eligible participants and, if applicable, brokers acting on their behalf, who desire to purchase Units in the rights offering must act promptly to ensure that all required subscription agreements and payments are actually received by us with respect to the rights before the expiration of the subscription period at 5:00 p.m., Eastern Standard Time, on November 15, 2010. The time period to exercise rights is limited. If you or your broker fail to complete and sign the required rights subscription agreement, send an incorrect payment amount, or otherwise fail to follow the procedures that apply to the exercise of your rights, we may, depending on the circumstances, reject your exercise of rights or accept it to the extent of the payment received, in which event, your current investment in our company would be diluted. We cannot undertake to contact you concerning, or attempt to correct, an incomplete or incorrect rights subscription agreement or payment or contact you concerning whether a broker holds rights on your behalf. We have the sole discretion to determine whether an exercise properly follows the applicable procedures.

The receipt of subscription rights may be treated as a taxable distribution to you.

The distribution of the subscription rights in this rights offering should be a non-taxable distribution under Section 305(a) of the Internal Revenue Code of 1986, as amended (the "Code"). Please see the discussion on the "Federal Income Tax Considerations" below. This position is not binding on the IRS, or the courts, however. If this rights offering is deemed to be part of a "disproportionate distribution" under Section 305 of the Code, your receipt of subscription rights in this offering may be treated as the receipt of a taxable distribution to you equal to the fair market value of the subscription rights. Any such distribution would be treated as dividend income to the extent of our current and accumulated earnings and profits, if any, with any excess being treated as a return of capital to the extent thereof and then as capital gain. Each holder of common stock is urged to consult his, her or its own tax advisor with respect to the particular tax consequences of this rights offering.

Absence of a public trading market for the Warrants may limit the ability of a purchaser to resell the Warrants.

There is no established trading market for the Warrants included in the Units, and the Warrants may not be widely distributed. There can be no assurance that a market will develop for the Warrants. Even if a market for the Warrants does develop, the price of the Warrants may fluctuate and liquidity may be limited. If a market for the Warrants does not develop, then purchasers of the Warrants may be unable to resell the Warrants or sell them only at an unfavorable price for an extended period of time, if at all. Future trading prices of the Warrants will depend on many factors, including:

- our operating performance and financial condition;
- our ability to continue the effectiveness of the registration statement, of which this prospectus is a part, covering the Warrants and the common stock issuable upon exercise of the Warrants;
- the interest of securities dealers in making a market; and
- the market for similar securities.

The market price of our common stock may never exceed the exercise price of the Warrants issued in connection with this offering.

The Warrants being issued in connection with this offering become exercisable upon issuance on the closing date after the expiration of the offering and will expire two years thereafter. We cannot provide you any assurance that the market price of our common stock will ever exceed the exercise price of these Warrants prior to their date of expiration. Any Warrants not exercised by their date of expiration will expire worthless and we will be under no further obligation to the holders of Warrants.

There can be no assurance that we can maintain an effective registration statement covering the shares of common stock underlying the Warrants, and in such event, the shares could not be sold in the open market unless subsequently registered or pursuant to an exemption from registration.

The Warrants are exercisable at any time during the period from the closing date after the termination of this offering and will expire two years thereafter. There can be no assurance that we will be able to maintain an effective registration statement covering the shares underlying the Warrants at all times during the exercise period. Upon issuance, the shares of Common Stock underlying the Warrants could only be sold in the open market if there is an effective registration statement covering these shares. If these shares would not be covered by an effective registration statement at the time of issuance, the shares would constitute restricted securities and could only be sold pursuant to an exemption from registration under the Securities Act of 1933, such as Rule 144, or if subsequently registered under

the Act. Pursuant to Rule 144, the holder of the shares who is not affiliated with the company may not sell the shares on the open market until six months following the date of issuance.

Cash dividends will not be paid to shareholders for the foreseeable future.

You may receive little or no cash or stock dividends on your shares of common stock. The board of directors has not directed the payment of any dividend, does not anticipate paying dividends on the shares for the foreseeable future and intends to retain any future earnings to the extent necessary to develop and expand our business. Payment of cash dividends, if any, will depend, among other factors, on our earnings, capital requirements, and the general operating and financial condition, and will be subject to legal limitations on the payment of dividends out of paid-in capital.

USE OF PROCEEDS

Assuming that subscription rights for all of the Units offered in this offering are exercised, we estimate that we would receive net proceeds of approximately \$18,950,000 in this rights offering, after deducting estimated expenses of the rights offering of approximately \$150,000. If all of the Warrants included in the Units are subsequently exercised, of which no assurance can be provided, we would receive additional gross proceeds of \$15,281,564, before deducting any warrant exercise related expenses that we may have incurred.

Our work program calls for the drilling of the Ma'anit-Joseph #3 well to a depth of approximately 5,900 meters (19,357 feet) on the Joseph License. Drilling began on the Ma'anit-Joseph #3 well in August 2010. Subject to the results of the seismic studies relating to the Elijah #3 well (which are currently being analyzed and interpreted), if subscription rights for all of the Units are exercised, then we will be able, subject to the results of the seismic studies, to either return to the Elijah #3 well or to drill a sidetrack well at the Ma'anit-Rehoboth #2 site at a cost of approximately \$7,000,000.

Our geologists are also analyzing the results of the recent seismic studies relating to our Issachar-Zebulun permit areas, in order to try and identify future drilling prospects within that permit area. Some of the proceeds from this offering will be used in furtherance of that work.

The proceeds from the exercise of the subscription rights for the Units in this rights offering (assuming all of the subscription rights are exercised) will enable us to initially fund our portion of Zion Drilling, Inc., a subsidiary to be created in order to purchase and own the 2,000 horsepower drilling rig currently owned and operated by Aladdin. The Memorandum of Understanding between us and Aladdin contemplates an initial payment of \$7,000,000 and then subsequent payments of \$1,000,000 in connection with the future drilling of each of seven new wells. Even it we are able to raise the funds needed to implement our plans under the Memorandum of Understanding, we cannot provide any assurance that we and Aladdin will successfully negotiate and conclude definitive agreements relating to the establishment of the subsidiary, the purchase by such subsidiary of the rig and other related matters. See "Risk Factors" on Page S-12.

The remaining net proceeds, if any, from the exercise of subscription rights for the Units will be used for general and administrative expenses, operations and working capital.

We intend to invest the net proceeds of this offering in short-term deposits, investment grade obligations or bank certificates of deposit in both Israel and the United States until the funds are required.

The following table sets forth the planned use of the proceeds from the exercise of the subscription rights for the Units offered in this rights offering (assuming subscription rights for all Units being offered are exercised):

		US\$ thousands	
Total Proceeds	\$ 19,100*	100%	
Less: Estimated Offering Expenses	\$ 150	0.8%	
Net Proceeds from Offering	\$ 18,950	99.2%	
Use of Net Proceeds:			
	\$		
Completion and testing of Ma'anit-Joseph #3 well	\$ 4,000	20.9%	
Zion Drilling – purchase of drilling rig	\$ 7,000	36.7%	
	\$		
	\$		
Elijah #3 re-entry or Ma'anit-Rehoboth #2 sidetrack	\$ 7,000	36.7%	

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	\$	\$
Reserve for Operations, G&A Expenses and Working	\$ 950	4.9% \$
Capital		
Total Use of Net Proceeds	\$ 18,950	99.2% \$

The foregoing reflects only estimates of the use of the proceeds from the exercise of the subscription rights for the Units. Actual expenditures may vary materially from these estimates. In addition, the above does not consider or address the use of proceeds from the proceeds received from the exercise, if any, of the Warrants included in the Units.

CAPITALIZATION

The following table sets forth a summary of our capitalization on an historical basis as of June 30, 2010, (adjusted to account for the most recent rights offering which we concluded in July 2010). For the purpose of this table, we have assumed that all of the rights were exercised in the new rights offering. However, there can be no assurance that the rights will be exercised. You should read this information in conjunction with our financial statements and the notes thereto which are incorporated by reference into this prospectus.

	Amount of Capitalization as of June 30, 2010 (3)					
	Actual (\$) (thousands)		As Adjusted (1) (\$) (thousands)		With Additional Shares (2) (\$) (thousands)	
Stockholders' equity:						
Common stock - par value \$0.01 per share	\$	212	\$	250	\$	288
Additional paid in capital	\$	84,692	\$	103,606	\$	118,849
Deficit accumulated in development stage	\$	(53,715)	\$	(53,715)	\$	(53,715)
Total stockholders' equity and capitalization	\$	31,189	\$	50,141	\$	65,422

- (1) Assumes that all subscriptions rights for all Units will be exercised in the offering.
- (2) Assumes that all of the Warrants included in the Units are exercised.
- (3) Adjusted to account for the most recent rights offering which closed in July 2010.

For the purpose of this table, we have assumed that all of the rights to purchase the Units ARE exercised in the new rights offering and that subsequently all of the Warrants included in the Warrants ARE exercised at the Warrant exercise price of \$4.00. However, there can be no assurance that the rights for all of the Units will be exercised or that subsequently all of the Warrants are exercised. You should read this information in conjunction with our financial statements and the notes thereto which are incorporated by reference into this prospectus.

DETERMINATION OF OFFERING PRICE

The Unit subscription price for the rights offering was set by our board of directors. In determining the subscription price, our board of directors considered a number of factors, including: our business prospects; the need to offer shares at a price that would be attractive to our investors; general conditions in the securities market; the likely cost of capital from other sources. The subscription price is not intended to bear any relationship to the book value of our assets or our past operations, cash flows, losses, financial condition, net worth or any other established criteria used to value securities, the amount of proceeds desired, our need for equity capital, the historic and current market price of our common stock, the historic volatility of the market price of our common stock, our business prospects, alternatives available to us for raising equity capital, the pricing of similar transactions and the liquidity of our common stock. The subscription price does not necessarily bear any relationship to our past operations, cash flows, book value, current financial condition, or any other established criteria for value. You should not consider the subscription price as an indication of the value of Zion Oil & Gas or our common stock.

The market price of our common stock is subject to change as a result of market conditions and other factors, and no assurance can be given that the market price of a share of our stock will not decline such that the price of the Units in the rights offering is at a price that is higher than both the prevailing market price of the shares of our common stock and the exercise price of the Warrants included in the Units. See "RISK FACTORS" beginning on page S-12 of this Prospectus.

As of June 30, 2010, (adjusted to account for the most recent rights offering which we concluded in July 2010), our net tangible book value was \$31,189,000 or \$1.47 per share of common stock. Net tangible book value is the aggregate amount of our tangible assets less our total liabilities. Net tangible book value per share represents our total tangible assets less our total liabilities, divided by the number of shares of common stock outstanding on June 30, 2010, as adjusted above.

Assuming that subscription rights for all of the Units are exercised (even though we do not anticipate that this will be the case), dilution would be calculated as follows. After giving effect to the issuance of 3,820,391 shares of our common stock included in the Units and after deducting offering expenses (estimated), \$150,000, our net tangible book value would increase to approximately \$50,141,000 and the tangible net book value per share would increase to \$2.00. These figures do not account for any Warrant exercises, if any, that may occur. This represents an immediate increase in net tangible book value of \$0.53 per share to current shareholders, and immediate dilution of \$3.00 per share on new shares purchased in the Unit or 60%. "Dilution" is determined by subtracting net tangible book value per share after the offering from the Unit subscription price paid by investors purchasing the Units. The following table illustrates this per share dilution to purchasers of Units in this rights offering, as illustrated in the following table:

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Assumed public offering price per share of common stock	\$	5.00
Net tangible book value per share before this Offering	\$ 1.47	
Increase per share attributable to new shares	\$ 0.53	
Adjusted net tangible book value per share after this Offering	\$	2.00
Dilution per share for new shares	\$	3.00
Percentage dilution		60%

Assuming that subscription rights for all of the Units are exercised and that all Warrants included in such Units are exercised (even though we do not anticipate that either such event will occur), dilution would be calculated as follows. After giving effect to the issuance of an additional 3,820,391 shares of our Common Stock upon exercise of the Warrants, our net tangible book value would increase to approximately \$65,422,000 and the tangible net book value per share would increase to \$2.27. This represents an immediate increase in net tangible book value of \$0.27 per share to current shareholders, and immediate dilution of \$1.73 per share on new shares purchased or 43%. "Dilution" is determined by subtracting net tangible book value per share after the Warrant exercises from the Warrant exercise price of \$4.00 then paid by investors upon exercise of the Warrants. The following table illustrates this per share dilution to purchasers of Units following the exercise of the Warrants, as illustrated in the following table:

Assumed warrant strike price per share of common stock	\$	4.00
Net tangible book value per share after this Offering but before warrant	\$ 2.00	
exercise		
Increase per share attributable to new shares	\$ 0.27	
Adjusted net tangible book value per share after this Offering	\$	2.27
Dilution per share for new shares	\$	1.73
Percentage dilution		43%

THE RIGHTS OFFERING

Before exercising any subscription rights, you should read carefully the information set forth under "Risk Factors" beginning on page S-12.

Terms of the Offer

We are distributing, at no charge to the holders of our common stock as of September 28, 2010, non-transferable subscription rights to subscribe for Units of our securities. Each Unit consists of (a) one (1) share of our Common Stock and (b) one (1) Warrant to purchase one (1) additional share of our Common Stock at an exercise price of \$4.00 per share. Each Unit may be purchased at a per Unit subscription price of \$5.00. Each Warrant is exercisable for a two (2) year period beginning on the closing date after the expiration of the rights offering.

The subscription rights will expire if they are not exercised by 5:00 p.m., Eastern Standard Time, on November 15, 2010, which date we refer to as the expiration date. We may extend the expiration date in our sole discretion, on one or more occasions.

To exercise subscription rights, holders must return the properly completed subscription rights certificate and any other required documents along with full payment of the subscription price for all Units for which subscriptions are exercised by the expiration date. Any subscription rights not exercised by the expiration date will expire worthless without any payment to the holders of those unexercised subscription rights.

There is no minimum subscription amount required for consummation of this rights offering. We may cancel this rights offering at any time prior to the expiration date for any reason. In the event that we cancel the rights offering, all subscription payments received by the subscription agent will be returned, without interest or deduction, as soon as

practicable.

Our common stock is quoted on the NASDAQ Global Market under the symbol "ZN". The shares of Common Stock included in the Units and the shares of Common Stock issued pursuant to the terms of the Warrants will also be listed on the NASDAQ Global Market under the "ZN" symbol. The Warrants to be issued pursuant to this offering are separately transferable following their issuance through their expiration date. The Warrants are not currently trading on any market. We have filed an application with NASDAQ to list the Warrants. If our application is accepted, the symbol "ZNWAZ" has been reserved to designate the Warrants The subscription rights are non-transferable during and after the subscription period.

The Subscription Rights

Basic Subscription Rights

We are distributing to you, at no cost, non-transferable subscription rights to purchase Units of our securities as a holder of record of shares of our common stock on September 28, 2010. We are distributing to you 0.18 of a subscription right (i.e., EIGHTEEN subscription rights for each ONE HUNDRED shares) for each share of common stock that you owned as a holder of record on September 28, 2010. Each whole subscription right entitles you to purchase one (1) Unit at a per Unit subscription price of \$5.00. Each Unit is comprised of (i) one (1) share of our Common Stock and (ii) one (1) related Warrant to purchase one (1) additional share of our common stock at \$4.00. The Warrant is exercisable for a two (2) year period beginning on the closing date following the expiration of the rights offering. The Warrants included in the Units are separately transferable following their issuance and through their expiration date, and upon issuance will be listed for quotation on the NASDAQ Global Market under the symbol "ZNWAZ."

You will not receive fractional subscription rights during the rights offering, but instead we will round your total number of subscription rights down to the next lowest whole number.

If you wish to exercise your subscription rights, you must do so before the close of business on November 15, 2010 or such later date as we may extend the offering to in our sole discretion. After that date, the subscription rights will expire and will no longer be exercisable. You will receive certificates representing the shares of Common Stock and the related Warrants that you purchase pursuant to your subscription rights as soon as practicable after the expiration date of the rights offering. We will not be issuing any certificate or instrument evidencing the Units being subscribed for upon exercise of your subscription rights. Upon issuance, the shares of Common Stock and the Warrants included in each Unit subscribed for are detachable and separately tradable.

Over-Subscription Rights

Subject to the allocation described below, each subscription right also grants the holder an over-subscription right to purchase additional Units that were not purchased by other rights holders pursuant to their basic subscription rights. You are entitled to exercise your over-subscription right only if you exercise your basic subscription right in full.

If you wish to exercise your over-subscription right, you should indicate the number of additional Units that you would like to purchase in the space provided on your rights subscription agreement. When you send in your rights subscription agreement, you must also send the full purchase price for the number of additional Units that you have requested to purchase (in addition to the payment due for Units purchased through your basic subscription right). If the number of Units remaining after the exercise of all basic subscription rights is not sufficient to satisfy all requests for Units pursuant to over-subscription rights, then the available Units will be prorated among those who properly exercised oversubscription rights based on the number of Units each rights holder subscribed for under the basic subscription right. However, if your pro-rate allocation exceeds the number of Units you requested on your rights subscription agreement then you will receive only the number of Units that you requested, and the remaining Units from your pro-rate allocation will be divided among other rights holders exercising their over-subscription rights.

As soon as practicable after the expiration date of the rights offering, we will determine the number of Units that you may purchase pursuant to the over-subscription right. You will receive certificates representing these securities as soon as practicable after the expiration date and after all allocations and adjustments have been effected. If you request and pay for more Units than are allocated to you, we will refund the overpayment, without interest. In connection with the exercise of the over-subscription right, banks, brokers and other nominee holders of subscription rights who act on behalf of beneficial owners will be required to certify to us as to the aggregate number of subscription rights exercised, and the number of Units requested through the over-subscription right, by each beneficial owner on whose behalf the nominee holder is acting. If you hold your shares through a brokerage account, you should note that most brokerages permit the beneficial owner to exercise their rights on one occasion only. Accordingly, if you plan to exercise your over-subscription right, you should do so at the time that you submit your subscription to your broker.

Subscription Price Per Unit

The subscription price under the subscription rights is \$5.00 per Unit subscribed. The subscription price does not necessarily bear any relationship to our past or expected future results of operations, cash flows, current financial condition, or any other established criteria for value. No change will be made to the cash subscription price by reason of changes in the trading price of our common stock or other factors prior to the closing of this offering.

Determination of Subscription Price for the Units

Our board of directors set all of the terms and conditions of this offering, including the subscription price per Unit. Our board of directors determined that the subscription price should be designed to provide an incentive to our current

shareholders to exercise their rights in the rights offering. In establishing the subscription price, our board of directors considered the book value of our common stock and various other factors, including the amount of proceeds desired, our need for equity capital, the historic and current market price of our common stock, the historic volatility of the market price of our common stock, our business prospects, general conditions in the oil and gas industry, alternatives available to us for raising equity capital, the pricing of similar transactions, including the pricing of our most recently completed rights offering which closed in July 2010 and the liquidity of our common stock. We did not seek or obtain any opinion of financial advisors or investment bankers in establishing the subscription price for the offering. You should not consider the subscription price as an indication of the value of our company or our common stock. We cannot assure that you will be able to sell shares of Common Stock included in the Units purchased during this offering at a price equal to or greater than the subscription price of \$5.00 or that you will be able to sell shares issuable upon any subsequent exercise of your warrants at a price equal to or greater than Warrant exercise price of \$4.00. On September 27, 2010, the closing sale price of our common stock was \$5.38 per share.

Expiration Date

The rights will expire at 5:00 p.m., Eastern Standard Time, on November 15, 2010, unless we decide, in our sole discretion, to extend the rights offering. If the commencement of the rights offering is delayed, the expiration date may be similarly extended. If you do not exercise your subscription rights prior to specified expiration date, whether it be the initial expiration date or a subsequently extended date, your subscription rights will be null and void. We will not be required to issue shares of Common Stock or Warrant instruments to you if we receive your subscription agreement or your payment after the specified expiration date, regardless of when you sent the subscription agreement and payment, unless you send the documents in compliance with the guaranteed delivery procedures described below.

Extensions, Cancellation and Termination

Expiration and Extensions. You may exercise your subscription rights at any time before 5:00 p.m., Eastern Standard time, on November 15, 2010, the expiration date of the rights offering, unless extended. Our board of directors may extend the expiration date for exercising your subscription rights in their sole discretion. Any extension of this offering will be followed as promptly as practicable by an announcement, and in no event later than 9:00 a.m., Eastern Standard time, on the next business day following the previously scheduled expiration date.

Any subscription rights not exercised at or before the expiration date will have no value and expire without any payment to the holders of those unexercised subscription rights. We will not be obligated to honor your exercise of subscription rights if the subscription agent receives the documents relating to your exercise after the rights offering expires, regardless of when you transmitted the documents.

Termination; Cancellation. We may cancel or terminate the rights offering at any time prior to the expiration date. Any cancellation or termination of this offering will be followed as promptly as practicable by an announcement of the cancellation or termination and any money received form subscribing rights holders will be returned as soon as practicable, without interest or deduction.

Non-Transferability of Subscription Rights

Except in the limited circumstances described below, only you may exercise your subscription rights. You may not sell, give away or otherwise transfer your subscription rights.

Notwithstanding the foregoing, you may transfer your rights to an existing 401(k), IRA or other similar investment plan (subject to all of the rules, regulations and restrictions of such plan) established for your benefit, or that plan may transfer such rights to you, provided that, in each case, such transfer is otherwise in compliance with all applicable federal and state securities laws. Your rights also may be transferred to any of your affiliates or by operation of law. For example, a transfer of rights to the estate of the recipient upon the death of the recipient would be permitted. As used in this paragraph, an affiliate means any person (including a 401(k), IRA or other similar investment plan subject to all the applicable rules, regulations and restrictions of such plan, a partnership, corporation or other legal entity such as a trust or estate) which controls, is controlled by or is under common control with you. If your rights are transferred as permitted, evidence satisfactory to us that the transfer was proper must be received by us prior to the expiration date of this offering.

Exercise of Subscription Rights

You may exercise your subscription rights by delivering to us on or prior to the expiration date:

A properly completed and duly executed subscription agreement;

- Any required signature guarantees or other supplemental documentation; and
- Payment in full of \$5.00 per Unit to be purchased pursuant to the basic subscription rights and the over-subscription right.

You should deliver your subscription agreement and payment to us at the address shown under the heading "Subscription Agent." We will not pay you interest on funds delivered for the exercise of rights.

You bear all risk for the method of delivery of rights subscription agreements, any necessary accompanying documents and payment of the subscription price. If you send the rights subscription agreement and other items by mail, we recommend that you send them by registered mail, properly insured, with return receipt requested. You should allow a sufficient number of days to ensure delivery and clearance of cash payment prior to the expiration time.

We reserve the right to reject any exercise of subscription rights if the exercise does not fully comply with the terms of the rights offering or is not in proper form or if the exercise of rights would be unlawful.

Method of Payment

Payment for the Units must be made by check or bank draft (cashier's check) drawn upon a U.S. bank or a money order payable to "Zion Oil & Gas", or by wire transfer of immediately available funds to the account maintained by us. Any wire transfer of funds should clearly indicate the identity of the subscriber who is paying the subscription price by the wire transfer. Payment will be deemed to have been received only upon:

- receipt and clearance of any uncertified check;
- •receipt by Zion of any certified check or bank draft drawn upon a U.S. bank, any money order or any funds transferred by wire transfers; or
 - receipt of good funds in the account maintained by us, designated above.

Please note that funds paid by uncertified personal check may take at least five business days to clear. Accordingly, if you wish to pay by means of an uncertified personal check, we urge you to make payment sufficiently in advance of the expiration date to ensure that we receive cleared funds before that date. We also urge you to consider payment by means of a certified or cashier's check or money order.

Guaranteed Delivery Procedures

If you wish to exercise your rights, but you do not have sufficient time to deliver the rights subscription agreement evidencing your rights to us before the expiration of the subscription period, you may exercise your rights by the following guaranteed delivery procedures:

- provide your payment in full of the subscription price for each share of common stock being subscribed for pursuant to the basic subscription rights and the over-subscription right to us before the expiration time;
 - deliver a notice of guaranteed delivery to us at or before the expiration time; and
- •deliver the properly completed rights certificate evidencing the rights being exercised, and, if applicable for a nominee holder, the related nominee holder certification, with any required signatures medallion guaranteed, to us, within three business days following the expiration time.

Your notice of guaranteed delivery must be substantially in the form provided with the "Instructions for Use of ZION OIL & GAS, INC. Subscription Certificates" distributed to you with your rights notification. Your notice of guaranteed delivery must come from an eligible institution which is a member of, or a participant in, a signature guarantee medallion program acceptable to Zion. In your notice of guaranteed delivery you must state:

your name;

- the number of rights represented by your rights subscription agreement, the number of shares of common stock you are subscribing for pursuant to your subscription rights; and
- •your guarantee that you will deliver to us any rights subscription agreements evidencing the rights you are exercising within three business days following the expiration time.

You may deliver the notice of guaranteed delivery to us in the same manner as the rights subscription agreement at the addresses set forth under the heading "Subscription Agent."

Eligible institutions may also transmit the notice of guaranteed delivery to us by facsimile transmission to (214) 221-6510. To confirm facsimile deliveries, you may call (214) 221-4610.

Signature Guarantees

Signatures on the subscription agreement do not need to be guaranteed if either the subscription agreement provides that the shares of Common Stock and Warrant included in the Unites to be purchased are to be delivered directly to the record owner of such subscription rights, or the subscription agreement is submitted for the account of a member firm of a registered national securities exchange or a member of the National Association of Securities Dealers, Inc., or a commercial bank or trust company having an office or correspondent in the United States. Signatures on all other subscription certificates must be guaranteed by an Eligible Guarantor Institution, as defined in Rule 17Ad-15 of the Securities Exchange Act of 1934, as amended, subject to the standards and procedures adopted by the Zion. Eligible Guarantor Institutions include banks, brokers, dealers, credit unions, national securities exchanges and savings associations.

Rights of Subscribers

Your exercise of rights in this rights offering will give you no additional rights as a shareholder until the shares you have agreed to purchase in the rights offering are deemed issued to you.

No Revocation of Exercised Rights

Once you send in your subscription agreement and payment, you cannot revoke the exercise of your subscription rights, even if the subscription period has not yet ended, we extend the subscription period, you later learn information about us that you consider to be unfavorable or the market price of our common stock declines significantly. You should not exercise your subscription rights unless you are certain that you wish to purchase Units in this rights offering at a price of \$5.00 per Unit.

Issuance of Common Stock and Warrants

We will issue the shares of our Common Stock and instruments evidencing the Warrants included in the Units which are purchased in the rights offering as soon as possible following the expiration date of the rights offering. The shares of Common Stock and Warrant instruments will be issued to those subscribers who have timely and properly completed subscription agreements, along with payment of the subscription price, for each Unit subscribed for. Each subscribing holder's new shares of Common Stock and Warrants will be issued in the same form, certificated or book-entry, as the rights exercised by that holder. We will not be issuing any certificate or instrument evidencing the Units being subscribed for. Upon issuance, the shares of Common Stock and the Warrants included in each Unit subscribed for are detachable and separately tradable.

Your payment of the aggregate subscription price for our Units will be deposited into a segregated account maintained by us and will not be accessed by Zion until after the termination date of the offering. We will not pay you any interest on funds paid for your rights exercise, regardless of whether the funds are applied to the subscription price or returned to you. You will have no rights as a shareholder of our company with respect to the subscribed for Units until the certificates representing the shares of Common Stock and Warrants included in the subscribed for Units are issued to you or such securities are deposited in the book-entry account held on your behalf. Certificates representing your securities or book-entries will be made as practically as possible after the expiration of the rights offering. Upon our issuance of the stock certificates and warrant instruments or the deposit of such securities in the applicable book-entry account, you will be deemed the owner of the securities you purchased by exercise of your rights. Unless otherwise instructed in the rights subscription agreement, the securities issued to you pursuant to your subscription will be registered in your name or the name of your nominee, if applicable. You will not receive fractional subscription rights during the rights offering, but instead we will round your total number of subscription rights down to the next lowest whole number.

Shares Held for Others

If you are a broker, a trustee or a depository for securities, or you otherwise hold shares of common stock for the account of others as a nominee holder, you should promptly notify the beneficial owner of such shares as soon as possible to obtain instructions with respect to their subscription rights, as set forth in the instructions we have provided to you for your distribution to beneficial owners. If the beneficial owner so instructs, you should complete the appropriate subscription agreement and the related nominee holder certification and submit them to us with the proper payment.

If you are a beneficial owner of common stock held by a nominee holder, such as a broker, trustee or a depository for securities, we will ask your broker, dealer or other nominee to notify you of this rights offering. If you wish to purchase Units through this rights offering, you should contact the holder and ask him or her to effect transactions in

accordance with your instructions on a form provided by your nominee holder with the other rights offering materials. If you hold your shares through a brokerage account, you should note that most brokerages permit the beneficial owner to exercise their rights on one occasion only. Accordingly, if you plan to exercise your over-subscription right, you should make sure to do so at the time that you submit your subscription to your broker.

Ambiguities in Exercise of Subscription Rights

If you do not specify the number of Units being subscribed for on your subscription certificate, or if your payment is not sufficient to pay the total purchase price for all of the Units you indicated you wished to purchase, you will be deemed to have subscribed for the maximum number of Units that could be subscribed for with the payment that we receive from you. If the aggregate subscription price paid by you exceeds the amount necessary to purchase the number of Units for which you have indicated an intention to subscribe, then you will be deemed to have exercised the over-subscription rights to the full extent of the excess payment tendered, to purchase, to the extent available, that number of Units equal to the quotient obtained by dividing the excess payment tendered by the subscription price. Any remaining amount shall be returned to you by mail, without interest or deduction, as soon as practicable after the expiration date and after all proration and adjustments contemplated by the terms of the rights offering have been effected.

Regulatory Limitation

We are not making the rights offering in any state or other jurisdiction in which it is unlawful to do so. We will not sell or accept an offer to purchase Units from you if you are a resident of any state or other jurisdiction in which the sale or offer of the rights would be unlawful. We may delay the commencement of the rights offering in certain states or other jurisdictions in order to comply with the laws of those states or other jurisdictions. However, we may decide, in our sole discretion, not to modify the terms of the rights offering as may be requested by certain states or other jurisdictions. If that happens and you are a resident of the state or jurisdiction that requests the modification, you will not be eligible to participate in the rights offering. We do not currently intend to make any changes in the terms of the rights offering.

We will not be required to issue to you shares of Common Stock or instruments evidencing the Warrants pursuant to the rights offering if, in our opinion, you would be required to obtain prior clearance or approval from any state or federal regulatory authorities to own or control such securities if, at the time the subscription rights expire, you have not obtained such clearance or approval.

Our Decision Binding

All questions concerning the timeliness, validity, form and eligibility of any exercise of subscription rights will be determined by us, and our determinations will be final and binding. In our sole discretion, we may waive any defect or irregularity, or permit a defect or irregularity to be corrected within such time as we may determine, or reject the purported exercise of any subscription right by reason of any defect or irregularity in any exercise. Subscriptions will not be deemed to have been received or accepted until all irregularities have been waived by us or cured within such time as we determine in our sole discretion. We will not be under any duty to notify you of any defect or irregularity in connection with the submission of a subscription agreement or incur any liability for failure to give you that notice.

Shares of Common Stock Outstanding After the Rights Offering

As of September 28, 2010, we had outstanding 21,224,397 shares of our common stock and an additional 1,516,679 shares of common stock have been reserved for issuance upon the exercise of certain outstanding warrants and options. Assuming subscriptions are received for all of the subscription rights (and none of our outstanding warrants and options are exercised), 25,044,788 shares of common stock will be outstanding and 5,337,070 shares of common stock have been reserved for issuance upon the exercise of certain outstanding warrants and options (including the Warrants offered as part of this rights Offering). This would represent an increase of approximately 18% in the number of outstanding shares of common stock. If all of the Warrants in this offering are subsequently exercised, of which no assurance can be provided, we will have a total of 28,865,179 shares outstanding (assuming that no other outstanding warrants and options are exercised). This would represent an increase of approximately 36% in the number of outstanding shares of our common stock. If you do not fully exercise your subscription rights but others do, the percentage of our common stock that you hold will decrease.

No Recommendations

Neither we nor our board of directors are making any recommendation as to whether or not you should exercise your subscription rights. You should make your decision based on your own assessment of your best interests.

Important

PLEASE CAREFULLY READ THE INSTRUCTIONS ACCOMPANYING THE SUBSCRIPTION AGREEMENT AND FOLLOW THOSE INSTRUCTIONS IN DETAIL. YOU ARE RESPONSIBLE FOR CHOOSING THE PAYMENT AND DELIVERY METHOD FOR YOUR SUBSCRIPTION AGREEMENT, AND YOU BEAR THE RISKS ASSOCIATED WITH SUCH DELIVERY. IF YOU CHOOSE TO DELIVER YOUR SUBSCRIPTION AGREEMENT AND PAYMENT BY MAIL, WE RECOMMEND THAT YOU USE REGISTERED MAIL, PROPERLY INSURED, WITH RETURN RECEIPT REQUESTED. WE ALSO RECOMMEND THAT YOU ALLOW A SUFFICIENT NUMBER OF DAYS TO ENSURE DELIVERY AND CLEARANCE OF PAYMENT PRIOR TO THE EXPIRATION DATE. BECAUSE UNCERTIFIED PERSONAL CHECKS MAY TAKE AT LEAST FIVE BUSINESS DAYS TO CLEAR, WE STRONGLY URGE YOU TO PAY, OR ARRANGE FOR PAYMENT, BY MEANS OF CERTIFIED OR CASHIER'S CHECK OR MONEY ORDER.

If You Have Questions

If you have questions or need assistance concerning the procedure for exercising subscription rights, or if you would like additional copies of this prospectus, the Instructions, or the Notice of Guaranteed Delivery, you should contact:

Zion Oil & Gas, Inc. 6510 Abrams Rd., Suite 300 Dallas, TX 75231 (214) 221-4610 or (888) 891-9466 e-mail: dallas@zionoil.com

PLAN OF DISTRIBUTION

Immediately following the effective date of this Prospectus, we will distribute at no cost the subscription rights and copies of this prospectus to all holders of record of our common stock on September 28, 2010. If you wish to exercise your basic subscription rights and the over-subscription rights and purchase Units, you should complete the subscription agreement and return it, with payment for the Units, to us, to 6510 Abrams Rd., Suite 300, Dallas, TX 75231. If you have any questions, you should contact Zion Oil & Gas at (214) 221-4610 or (888) 891-9466.

FEDERAL INCOME TAX CONSIDERATIONS

The following summarizes the material federal income tax consequences to U.S. holders, as defined below, of the receipt, lapse, or exercise of the subscription rights distributed to you pursuant to the rights offering. This discussion does not address the tax consequences of the rights offering under applicable state, local or foreign tax laws. Moreover, this discussion does not address every aspect of taxation that may be relevant to a particular taxpayer under special circumstances or who is subject to special treatment under applicable law and is not intended to be applicable in all respects to all categories of investors. For example, certain types of investors, such as insurance companies, tax-exempt persons, financial institutions, regulated investment companies, dealers in securities, persons who hold their shares of our common stock as part of a hedging, straddle, constructive sale or conversion transaction, persons whose functional currency is not the U.S. dollar and persons who are not treated as a U.S. shareholder could be subject to different tax consequences.

For purposes of this disclosure, a U.S. holder is a holder of our common stock that is:

- a citizen or resident of the United States,
- a corporation, partnership or other entity created in, or organized under the laws of the United States or any state or political subdivision thereof;
- •an estate the income of which is includable in gross income for U.S. federal income tax purposes regardless of its source; or
- a trust that (i) the administration of which is subject to the primary supervision of a U.S. court and which has one or more U.S. persons who have the authority to control all substantial decisions of the trust, or (ii) that was in existence on August 20, 1996, was treated as a U.S. person on the previous day, and elected to continue to be so treated.

This summary is based on the Internal Revenue Code of 1986, as amended (which we will refer to as the "Code"), the Treasury regulations promulgated thereunder, judicial authority and current administrative rules and practice, any of which may subsequently be changed, possibly retroactively, or interpreted differently by the Internal Revenue Service, so as to result in U.S. federal income tax consequences different from those discussed below. The discussion that follows neither binds nor precludes the Internal Revenue Service from adopting a position contrary to that expressed in this prospectus, and we cannot assure you that such a contrary position could not be asserted successfully by the Internal Revenue Service or adopted by a court if the positions were litigated. We have not obtained a ruling from the Internal Revenue Service or a written opinion from tax counsel with respect to the federal income tax consequences discussed below. This discussion assumes that your shares of common stock and the subscription rights and shares issued to you during the rights offering constitute capital assets within the meaning of Code Section 1221.

THIS DISCUSSION IS INCLUDED FOR YOUR GENERAL INFORMATION ONLY. YOU SHOULD CONSULT YOUR TAX ADVISOR TO DETERMINE THE TAX CONSEQUENCES TO YOU OF THE RIGHTS OFFERING IN LIGHT OF YOUR PARTICULAR CIRCUMSTANCES, INCLUDING ANY STATE, LOCAL AND FOREIGN TAX CONSEQUENCES.

Subscription Rights.

Each whole subscription right entitles eligible stockholders the right to purchase for \$5.00 one Unit, consisting of one share of our common stock and a two year Warrant to purchase one additional share of our common stock at an exercise price of \$4.00 per share. Generally, the distribution of stock by a corporation to its shareholders with respect to their stock is not taxable to such shareholders pursuant to Section 305(a) of the Code. For such purpose, a distribution of rights to acquire stock of the distributing corporation constitutes a distribution of stock. However, if a

distribution of stock or rights to acquire stock is within one of several exceptions to the general rule of Section 305(a) set forth in Section 305(b) of the Code, the distribution may be taxable to the shareholders of the distributing corporation as described below.

Section 305(b)(2) is an exception to the general rule of Section 305(a) that applies to a "disproportionate distribution." Pursuant to Section 305(b)(2), a distribution (or a series of distributions of which such a distribution is one) of stock rights constitutes a "disproportionate distribution," and is therefore taxable, if the distribution results in (a) the receipt of property, including cash, by some shareholders, and (b) an increase in the proportionate interest of other shareholders in the assets or earnings and profits of the distributing corporation. For this purpose, the term "property" means money, securities, and any other property, except that such term does not include stock in the corporation making the distribution or rights to acquire such stock. A "series of distributions" encompasses all distributions of stock made or deemed made by a corporation which have the result of receipt of cash or property by some shareholders and an increase in the proportionate interests of other shareholders. It is not necessary for a distribution of stock to be considered as one of a series of distributions that such distribution be pursuant to a plan to distribute cash and property to some shareholders and to increase the proportionate interests of the other shareholders, rather it is sufficient if there is a distribution (or a deemed distribution) having such effect. In addition, there is no requirement that both elements of Section 305(b)(2) of the Code occur in the form of a distribution or series of distributions as long as the result is that some shareholders receive cash and property and other shareholders' proportionate interests increase. Under the applicable Treasury Regulations, where the receipt of cash or property occurs more than 36 months following a distribution or series of distributions of stock, or where a distribution is made more than 36 months following the receipt of cash or property, such distribution or distributions will be presumed not to result in the receipt of cash or property by some shareholders and an increase in the proportionate interest of other shareholders, unless the receipt of cash or property by some shareholders and the distribution or series of distributions are made pursuant to a plan.

We believe that the distribution of rights in the rights offering does not constitute an increase in the proportionate interest of some shareholders in the assets or earnings and profits of Zion Oil & Gas for the purpose of Section 305(b)(2) because all of our stockholders will receive rights in the rights offering based upon their respective ownership our common stock. Accordingly, we do not believe that the rights offering should constitute part of a "disproportionate distribution," pursuant to Section 305(b)(2) of the Code. However, there can be no assurances that our application of Section 305 to the rights offerings is accurate. In the event the IRS successfully asserts that your receipt of subscription rights is currently taxable pursuant to Section 305(b) of the Code, the discussion under the heading "Alternative Treatment of Subscription Rights" describes the tax consequences that will result from such a determination.

Receipt of Subscription Rights

You should not recognize any gain or other income upon receipt of a subscription right in the rights offering. However, there can be no assurance of this result. Your tax basis in each subscription right for United States federal income tax purposes will depend on the fair market value of the subscription rights you receive and the fair market value of your existing shares of stock on the date you receive the subscription rights. The tax basis of the subscription rights received by you in the subscription rights offering will be zero unless either (i) the fair market value of the subscription rights on the date of issuance is 15% or more of the fair market value (on the date of issuance of the rights) of the common stock with respect to which they are received or (ii) you properly elect, in your federal income tax return for the taxable year in which the subscription rights are received, to allocate part of your basis in your common stock to the subscription rights. If either (i) or (ii) is true, then if you exercise the subscription rights, your basis in the common stock will be allocated between the common stock and the rights in proportion to the fair market value of each on the date the rights are issued in proportion to their respective fair market values on the date the subscription rights are distributed. In addition, any tax basis allocated to the subscription rights must be apportioned between the right to receive shares of Common Stock include in the Unit, and the right to receive the Warrants, in proportion to their respective fair market values on the date you receive the subscription rights.

Your holding period for subscription rights will include your holding period for the shares of common stock upon which the subscription right is issued.

Expiration of subscription rights.

If you allow subscription rights received in the subscription rights offering to expire, you should not recognize any gain or loss. If you have tax basis in the subscription rights, the tax basis of the shares owned by you with respect to which such subscription rights were distributed will be restored to the tax basis of such shares immediately prior to the receipt of the subscription rights in the subscription rights offering.

Exercise of subscription rights.

You should not recognize a gain or loss on the exercise of a subscription right. The tax basis of Common Stock and Warrants acquired through exercise of your subscription rights will be equal to the sum of your tax basis (if any) in the subscription right exercised and the subscription price..

The holding period of the shares of Common Stock and Warrants purchased through the rights offering will begin on the date that you exercise your subscription rights. The holding period of any shares issuable upon exercise of a Warrant purchased through the rights offering will begin on the date that you exercise the warrant.

Alternative Treatment of Subscription Rights

Receipt

If the IRS were to successfully assert that the distribution of the subscription rights in the rights offering resulted in a "disproportionate" distribution or is otherwise taxable pursuant to Section 305(b), each holder would be considered to have received a distribution with respect to such holder's stock in an amount equal to the fair market value of the subscription rights received by such holder on the date of the distribution. This distribution generally would be taxed as dividend income to the extent of your ratable share of our current and accumulated earnings and profits. The amount of any distribution in excess of our earnings and profits will be applied to reduce, but not below zero, your tax basis in your stock, and any excess generally will be taxable to you as capital gain (long-term, if your holding period with respect to your common stock is more than one year as of the date of distribution, and otherwise short-term). Under current law for taxable years beginning prior to January 1, 2011, so long as certain holding period requirements are satisfied, the maximum federal income tax rate on most dividends received by individuals is generally 15%. Your tax basis in the subscription rights received pursuant to the rights offering would be equal to their fair market value on the date of distribution and the holding period for the rights would begin upon receipt.

Expiration

Assuming the receipt of subscription rights in the rights offering is a taxable event, if your subscription rights lapse without being exercised, you will recognize a capital loss equal to your tax basis in such expired subscription rights. The deductibility of capital losses is subject to limitations.

STATE AND FOREIGN SECURITIES LAWS

The rights offering is not being made in any state or other jurisdiction in which it is unlawful to do so. We may delay the commencement of the rights offering in certain states or other jurisdictions in order to comply with the securities law requirements of such states or other jurisdictions. In our sole discretion, we may decline to make modifications to the terms of the rights offering requested by certain states or other jurisdictions, in which case shareholders who live in those states or jurisdictions will not be eligible to participate in the rights offering.

LEGAL MATTERS

Aboudi & Brounstein will pass on the validity of the issuance of the securities offered by this prospectus.

INFORMATION INCORPORATED BY REFERENCE

The SEC allows us to "incorporate by reference" into this prospectus the information we file with the SEC. This permits us to disclose important information to you by referencing these filed documents. Any information referenced in this way is considered part of this prospectus and any prospectus supplement. Any information filed with the SEC after the date on the cover of this prospectus or any prospectus supplement will automatically be deemed to update and supersede this prospectus and such prospectus supplement. We incorporate by reference the documents listed below and any future filings made by us with the SEC with file number 001-33228 under Sections 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act of 1934, as amended, until all of the securities described in this prospectus are sold:

- * our Annual Report on Form 10-K for the year ended December 31, 2009 filed on March 16, 2010; * our definitive proxy statement filed on April 16, 2010;
- * our Quarterly Reports on Form 10-Q for the quarterly periods ended March 31, 2010 and June 30, 2010;
- *Our Current Report on Form 8-K filed on August 12, 2010, August 20, 2010, August 27, 2010, September 3, 2010, September 8, 2010 and September 17, 2010;
- *the description of our common stock in our registration statement on Form 8-A filed with the SEC on December 29, 2006, including any amendments or reports filed for the purpose of updating such description.

You can request a copy of any document incorporated by reference in this prospectus, at no cost, by writing or telephoning or e-mailing us at the following contacts: address: 6510 Abrams Road, Suite 300, Dallas, Texas 75231; telephone: (214) 221-4610; email: dallas@zionoil.com..

You should rely only on the information in this prospectus supplement, the accompanying prospectus, any applicable free writing prospectus and the documents that are incorporated herein or therein by reference. We have not authorized anyone else to provide you with different information. We are not offering these securities in any state where the offer is prohibited by law. You should not assume that the information in this prospectus supplement, the accompanying prospectus, any applicable free writing prospectus or any document incorporated by reference into any of them is accurate as of any date other than the date of the applicable document.

ANNEX A

FORM OF NON-TRANSFERABLE SUBSCRIPTION CERTIFICATE

For use by Zion acting as Subscription Agent

ZION OIL & GAS, INC.

NON-TRANSFERABLE SUBSCRIPTION CERTIFICATE FOR RIGHTS OFFERING

FOR HOLDERS OF RECORD ON SEPTEMBER 28, 2010

ZION OIL & GAS, INC. (the "Company") is conducting a rights offering (the "Rights Offering") that entitles the holders of the Company's common stock, \$0.01 par value per share (the "Common Stock"), as of the close of business on September 28, 2010 (the "Record Date"), to receive 0.18 of a subscription right (each, a "Right") for each share of Common Stock held of record on the Record Date (i.e., EIGHTEEN subscription rights for each ONE HUNDRED shares). Each whole Right entitles the holder to subscribe for and purchase one (1) unit (each a "Unit") of the Company's securities, with each Unit consisting of (i) one (1) share of the Company's common stock, par value \$0.01 per share (the "Common Stock"), and (ii) one (1) warrant to purchase an additional share of the Company's Common Stock at an exercise price of \$4.00 per share (each a "Warrant" and collectively the "Warrants"; the "Basic Subscription Right"). Each Unit may be purchased at a per Unit subscription price of \$5.00. The Warrant is exercisable for a two (2) year period beginning on the closing date after the expiration of the Rights Offering.

Set forth above is the number of shares of Units to which the holder whose name and address is set forth above is entitled to subscribe pursuant to the Basic Subscription Right. If you exercise your rights in full, you may also exercise an over-subscription right (the "Over-Subscription Right") to purchase additional Units that remain unsubscribed at the expiration of the Rights Offering, subject to availability and allocation of Units among persons exercising this Over-Subscription Right. If there is a change of address and you wish to subscribe, please note the new address on Form 2. Your records will be updated with the new information.

No fractional subscription rights or fractional Units will be issued in this offering. Instead, the number of subscription rights will be rounded down to the next lowest whole number.

For a more complete description of the terms and conditions of the Rights Offering, please refer to the Company's Supplemental Prospectus dated September 29, 2010 (the "Prospectus"), which is incorporated herein by reference. Copies of the prospectus are available upon request from the Dallas office, by phone at 1-888-891-9466 or 214-221-4610 or by e-mail at dallas@zionoil.com.

This subscription certificate (the "Rights Certificate") must be received by us with payment in full by 5:00 p.m., Eastern Standard time, on November 15, 2010 (unless extended in the sole discretion of the Company) (as it may be extended, the "Expiration Date"). Any Rights not exercised prior to the Expiration Date will be null and void. Any subscription for Units in the Rights Offering made hereby is irrevocable.

The Rights represented by this Rights Certificate may be exercised by duly completing Form 1. Rights holders are advised to review the Prospectus before determining whether to exercise their Rights. In addition, if certificates representing the shares of Common Stock included in the Unit and the Warrant instruments are to be issued in a name other than the registered holder or are to be sent to an address other than that shown above, also complete Form 2.

SUBSCRIPTION PRICE: \$5.00 PER UNIT

The registered owner whose name is inscribed hereon is entitled to subscribe for Units upon the terms and subject to the conditions set forth in the Prospectus and instructions relating to the use hereof.

Except in limited circumstances described in the Prospectus, only you may exercise your Rights.

Rights holders should be aware that if they choose to exercise only part of their Rights, they may not receive a new Rights Certificate in sufficient time to exercise the remaining Rights evidenced thereby.

FORM 1

EXERCISE AND SUBSCRIPTION: The undersigned hereby irrevocably exercises one or more Rights to subscribe for Units as indicated below, on the terms and subject to the conditions specified in the Prospectus, receipt of which is hereby acknowledged.

Basic Subscription Rights:

I subscribe Units at \$5.00 for each = \$

(no. of Units (subscription price)

subscribed for)

Over-Subscription Rights:

IF YOU HAVE SUBSCRIBED FOR YOUR BASIC SUBSCRIPTION RIGHT AND WISH TO PURCHASE ADDITIONAL UNITS PURSUANT TO THE OVER-SUBSCRIPTION RIGHT (TO THE EXTENT AVAILABLE):

Units at \$5.00

I wish to subscribe for each =\$

(no. of Units (subscription price)

subscribed for)

Total Amount

Enclosed =\$

I. METHOD OF PAYMENT (CHECK AND COMPLETE APPROPRIATE BOX (ES)):

" Check, bank draft, or money order payable to "Zion Oil & Gas" or

"Wire transfer directed to the account maintained by us (contact Zion for wire instructions).

If the Rights being executed pursuant to the Basic Subscription Rights do not account for all of the Rights represented by the Rights Certificate (check only one):

- " Deliver to the undersigned a new Rights Certificate evidencing the remaining Rights to which the undersigned is entitled.
- " Do not deliver any new Rights Certificate to me.
- " Check here if Rights are being exercised pursuant to the Notice of Guaranteed Delivery delivered to Zion prior to the date hereof and complete the following:

Name(s) of Registered Holder(s)

Window Ticket Number (if any)

Date of Execution of Notice of Guaranteed Delivery

Name of Institution Which Guaranteed Delivery

* If the aggregate Subscription Price enclosed or transmitted is insufficient to purchase the total number of Units indicated in the "Total" line above, or if the number of Units being subscribed for is not specified, the Rights holder exercising this Rights Certificate shall be deemed to have subscribed for the maximum amount of Units that could be subscribed for upon payment of such amount. If the aggregate Subscription Price paid by you exceeds the amount necessary to purchase the number of Units for which you have indicated an intention to subscribe (such excess being the "Subscription Excess"), then you will be deemed to have exercised the Over-Subscription Rights to the full extent of the excess payment tendered, to purchase, to the extent available, that number of whole Units equal to the quotient obtained by dividing the Subscription Excess by the Subscription Price. To the extent any portion of the aggregate Subscription Price enclosed or transmitted remains after the foregoing procedures, such funds shall be mailed to the subscriber without interest or deduction as soon as practicable.

ACKNOWLEDGMENT—THE SUBSCRIPTION ORDER FORM IS NOT VALID UNLESS YOU SIGN BELOW

I/We acknowledge receipt of the Prospectus and the terms set forth herein and understand that after delivery to the Company we may not modify or revoke this Subscription Certificate. Under penalties of perjury, I/we certify that the information contained herein, including the social security number or taxpayer identification number given above, is correct.

The signature below must correspond with the name of the registered holder exactly as it appears on the books of the Company's transfer agent without any alteration or change whatsoever.

Signature(s) of Regist Holder:	stered	Date:	
•		, guardian(s), attorney(s)-in-fact, agent(s), officer(s) ative capacity, please provide the following information	
Name: Address:	Capacity:	Soc. Sec. #/Tax ID #: Phone:	
The Rights are not transi	ferable in any way, except to affiliat	tes of the recipient and except by operation of law.	
•	1 0 1	tted transfer is proper must be delivered to Zion Oil & night courier to 6510 Abrams Rd., Suite 300, Dallas,	

FORM 2

SPECIAL ISSUANCE OR DELIVERY INSTRUCTIONS

(a) To be completed ONLY if the certificate representing the Common Stock included in the Unit and/or the instrument representing the Warrant(s) included in the Unit is/are to be issued in a name other than that of the registered holder. DO NOT FORGET TO COMPLETE THE MEDALLION GUARANTEE OF SIGNATURE(S) SECTION BELOW.

	Soc. Sec. #/Tax ID
Issue Shares to:	#:
Address:	

(b) To be completed ONLY if the certificate representing the Common Stock included in the Unit and/or the instrument representing the Warrant(s) included in the Unit is/are to be sent to an address other than that shown above. See the Instructions. DO NOT FORGET TO COMPLETE THE MEDALLION GUARANTEE OF SIGNATURE(S) SECTION BELOW.

Name: Address:

MEDALLION GUARANTEE OF SIGNATURES

All Rights Holders who specify special issuance or delivery instructions must have their signatures guaranteed by an Eligible Institution, as defined in Rule 17Ad-15 of the Securities Exchange Act of 1934, as amended.

Name of Firm Authorized Signature

Address

City, State, Zip Code Title

Area Code and Telephone Number

YOU MUST HAVE YOUR SIGNATURE MEDALLION GUARANTEED IF YOU WISH TO HAVE YOUR SHARES DELIVERED TO AN ADDRESS OTHER THAN YOUR OWN OR TO A SHAREHOLDER OTHER THAN YOURSELF.

[Face of Certificate - ZION OIL & GAS, INC.]

(SEE REVERSE SIDE FOR LEGEND)

W

WARRANTS

(THIS WARRANT WILL BE VOID IF NOT EXERCISED PRIOR TO 5:00 P.M., EASTERN STANDARD TIME, ______, 2012)

ZION OIL & GAS, INC.

CUSIP 989696 125

WARRANT

THIS CERTIFIES THAT, for value received is	the registered holder of a Warrant or Warrants
expiring, 2012 (the "Warrant") to purchase one fully par	id and non-assessable share of Common Stock, par
value \$.01 per share (the "Shares"), of ZION OIL & GAS, INC.,	a Delaware corporation (the "Company"). The
Warrant entitles the holder thereof to purchase from the Company	y, commencing on1, such number of
Shares of the Company at the price of \$4.00 per share, upon surre	ender of this Warrant Certificate and payment of the
Warrant Price at the office or agency of the Warrant Agent, Regis	strar and Transfer Company (such payment to be
made by check made payable to the order of the Company), but of	only subject to the conditions set forth herein and in
the Warrant Agreement between the Company and the Warrant A	Agent. In no event shall the registered holder of this
Warrant be entitled to receive a net-cash settlement or other cons	ideration in lieu of physical settlement in Shares of
the Company. The Warrant Agreement provides that, upon the oc	ccurrence of certain events, the Warrant Price and the
number of Warrant Shares purchasable hereunder, set forth on the	e face hereof, may, subject to certain conditions, be
adjusted. The term Warrant Price as used in this Warrant Certific	ate refers to the price per Share at which Shares may
be purchased at the time the Warrant is exercised.	

This Warrant may expire on the date first above written if it is not exercised prior to such date by the registered holder pursuant to the terms of the Warrant Agreement.

No fraction of a Share will be issued upon any exercise of a Warrant. If, upon exercise of a Warrant, a holder would be entitled to receive a fractional interest in a Share, the Company will, upon exercise, round up to the nearest whole number of shares of common stock to be issued to the warrant holder.

Upon any exercise of the Warrant for less than the total number of full Shares provided for herein, there shall be issued to the registered holder hereof or his/her/its assignee a new Warrant Certificate covering the number of Shares for which the Warrant has not been exercised.

Warrant Certificates, when surrendered at the office or agency of the Warrant Agent by the registered holder hereof in person or by attorney duly authorized in writing, may be exchanged in the manner and subject to the limitations provided in the Warrant Agreement, but without payment of any service charge, for another Warrant Certificate or Warrant Certificates of like tenor and evidencing in the aggregate a like number of Warrants.

1 The exercise period of this warrant is for two years, with such exercise period beginning on the closing date of the rights offering until 5:00 p.m., Eastern Standard time, on the second anniversary date thereof, and, if such expiration date falls on a day other than a trading day, on the immediately preceding trading day

Upon due presentment for registration of transfer of the Warrant Certificate at the office or agency of the Warrant Agent, a new Warrant Certificate or Warrant Certificates of like tenor and evidencing in the aggregate a like number of Warrants shall be issued to the transferee in exchange for this Warrant Certificate, subject to the limitations provided in the Warrant Agreement, without charge except for any applicable tax or other governmental charge.

The Company and the Warrant Agent may deem and treat the registered holder as the absolute owner of the Warrants represented by this Warrant Certificate (notwithstanding any notation of ownership or other writing hereon made by anyone) for the purpose of any exercise hereof, of any distribution to the registered holder, and for all other purposes, and neither the Company nor the Warrant Agent shall be affected by any notice to the contrary.

This Warrant does not entitle the registered holder to any of the rights of a stockholder of the Company.

COUNTERSIGNED:

Registrar and Transfer Company

WARRANT AGENT

BY:

AUTHORIZED OFFICER

DATED:

(Signature)

CHIEF EXECUTIVE OFFICER

(Seal)

(Signature)

SECRETARY

SUBSCRIPTION FORM

To Be Executed by the Registered Holder in Order to Exercise Warrants

The undersigned Registered Holder irrevocably elects to exercise Warrants represented by this Warrant Certificate, and to purchase the shares of Common Stock issuable upon the exercise of such Warrants, and requests that Certificates for such shares shall be issued in the name of
(PLEASE TYPE OR PRINT NAME AND ADDRESS)
(SOCIAL SECURITY OR TAX IDENTIFICATION NUMBER) and be delivered
to(PLEASE PRINT OR TYPE NAME AND ADDRESS)
and, if such number of Warrants shall not be all the Warrants evidenced by this Warrant Certificate, that a new Warrant Certificate for the balance of such Warrants be registered in the name of, and delivered to, the Registered Holder at the address stated below:
Dated:
(SIGNATURE)
(ADDRESS)
(TAX IDENTIFICATION NUMBER)
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THE SIGNATURE TO THE ASSIGNMENT OF THE SUBSCRIPTION FORM MUST CORRESPOND TO THE NAME WRITTEN UPON THE FACE OF THIS WARRANT CERTIFICATE IN EVERY PARTICULAR, WITHOUT ALTERATION OR ENLARGEMENT OR ANY CHANGE WHATSOEVER, AND MUST BE GUARANTEED BY A COMMERCIAL BANK OR TRUST COMPANY OR A MEMBER FIRM OF THE AMERICAN STOCK EXCHANGE, NEW YORK STOCK EXCHANGE, PACIFIC STOCK EXCHANGE OR CHICAGO STOCK EXCHANGE.

ASSIGNMENT
To Be Executed by the Registered Holder in Order to Assign Warrants
For Value Received,hereby sell, assign, and transfer unto
(PLEASE TYPE OR PRINT NAME AND ADDRESS)
(SOCIAL SECURITY OR TAX IDENTIFICATION NUMBER)
and be delivered to
(PLEASE PRINT OR TYPE NAME AND ADDRESS)
Of the Warrants represented by this Warrant Certificate, and hereby irrevocably constitute and
appointAttorney to transfer this Warrant Certificate on the books of the Company, with full power of substitution in the premises.
Dated:
(SIGNATURE)
Notice: The signature to this assignment must correspond with the name as written upon the face of the certificate in every particular, without alteration or enlargement or any change whatever.
Signature(s) Guaranteed:
THE SIGNATURE(S) MUST BE GUARANTEED BY AN ELIGIBLE GUARANTOR INSTITUTION (BANKS, STOCKBROKERS, SAVINGS AND LOAN ASSOCIATIONS AND CREDIT UNIONS WITH MEMBERSHIP IN AN APPROVED SIGNATURE GUARANTEE MEDALLION PROGRAM, PURSUANT TO S.E.C. RULE 17Ad-15).
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Subject to Completion, Dated April 16, 2010

THE INFORMATION IN THIS PROSPECTUS IS NOT COMPLETE AND MAY BE CHANGED. WE MAY NOT SELL THESE SECURITIES OR ACCEPT AN OFFER TO BUY THESE SECURITIES UNTIL THE REGISTRATION STATEMENT FILED WITH THE SECURITIES AND EXCHANGE COMMISSION IS EFFECTIVE. THIS PROSPECTUS IS NOT AN OFFER TO SELL THESE SECURITIES AND IT IS NOT SOLICITING AN OFFER TO BUY THESE SECURITIES IN ANY STATE OR JURISDICTION WHERE THE OFFER OR SALE IS NOT PERMITTED.

PROSPECTUS

\$50,000,000

ZION OIL & GAS, INC.

Common Stock, Debt Securities, Warrants, Units and Rights

This prospectus is part of a registration statement that we filed with the Securities and Exchange Commission using a "shelf" registration process. From time to time, we may offer up to \$50,000,000 of any combination of the securities described in this prospectus, either individually or in units.

This prospectus provides a general description of the securities we may offer. Each time we sell securities, we will provide specific terms of the securities offered in a supplement to this prospectus. The prospectus supplement may also add, update or change information contained in this prospectus. You should read this prospectus and the applicable prospectus supplement carefully before you invest in any securities.

Shares of our common stock and common stock purchase warrants have, since September 2, 2009, been trading on the NASDAQ Global Market under the symbols "ZN" and "ZNWAW", respectively. From January 3, 2007 and through September 1, 2009, shares of our common stock were traded on the NYSE Amex, also under the symbol "ZN" and from February 3, 2008 to September 1, 2009 shares of our common stock purchase warrants traded under the symbol "ZN.WS. The last sale price of our common stock on the NASDAQ Global Market on March 25, 2010 was \$ 6.31. The applicable prospectus supplement will contain information, where applicable, as to any other listing on NASDAQ Global Market or any securities market or other exchange of the securities, if any, covered by the prospectus supplement.

Investing in our securities involves a high degree of risk. We urge you to carefully consider the risks that we have described on page 10 of this prospectus under the caption "Risk Factors." We may also include specific risk factors in supplements to this prospectus under the caption "Risk Factors." This prospectus may not be used to offer or sell our securities unless accompanied by a prospectus supplement.

We will sell these securities directly to investors, through agents designated from time to time or to or through underwriters or dealers. For additional information on the methods of sale, you should refer to the section entitled "Plan of Distribution" in this prospectus. If any underwriters are involved in the sale of any securities with respect to which this prospectus is being delivered, the names of such underwriters and any applicable commissions or discounts will be set forth in a prospectus supplement. The price to the public of such securities and the net proceeds we expect to receive from such sale will also be set forth in a prospectus supplement.

NEITHER THE SECURITIES AND EXCHANGE COMMISSION NOR ANY STATE SECURITIES COMMISSION HAS APPROVED OR DISAPPROVED OF THESE SECURITIES OR PASSED UPON THE ADEQUACY OR ACCURACY OF THIS PROSPECTUS. ANY REPRESENTATION TO THE CONTRARY IS A CRIMINAL OFFENSE.

The date of this prospectus is April 16, 2010.

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ABOUT THIS PROSPECTUS

This prospectus is a part of a registration statement that we filed with the Securities and Exchange Commission, or SEC, utilizing a "shelf" registration process. Under this shelf registration process, we may sell any combination of the securities described in this prospectus in one or more offerings up to a total dollar amount of \$50,000,000. This prospectus provides you with a general description of the securities we may offer. Each time we sell securities under this shelf registration, we will provide a prospectus supplement that will contain specific information about the terms of that offering. The prospectus supplement may also add, update or change information contained in this prospectus. You should read both this prospectus and any prospectus supplement together with additional information described under the heading "Where You Can Find More Information."

You should rely only on the information provided or incorporated by reference in this prospectus or any prospectus supplement. We have not authorized any dealer, salesman or other person to give any information or to make any representation other than those contained or incorporated by reference in this prospectus and the accompanying supplement to this prospectus. You must not rely upon any information or representation not contained or incorporated by reference in this prospectus or the accompanying prospectus supplement. This prospectus and the accompanying supplement to this prospectus do not constitute an offer to sell or the solicitation of an offer to buy any securities other than the registered securities to which they relate, nor do this prospectus and the accompanying supplement to this prospectus constitute an offer to sell or the solicitation of an offer to buy securities in any jurisdiction to any person to whom it is unlawful to make such offer or solicitation in such jurisdiction. You should not assume that the information contained in this prospectus and the accompanying prospectus supplement is accurate on any date subsequent to the date set forth on the front of the document or that any information we have incorporated by reference is correct on any date subsequent to the date of the document incorporated by reference, even though this prospectus and any accompanying prospectus supplement is delivered or securities sold on a later date. In this prospectus and any prospectus supplement, unless otherwise indicated, the terms "Company," "we," "our" and "us" refer to Zion Oil & Gas, Inc., a corporation incorporated in the State of Delaware.

THIS PROSPECTUS MAY NOT BE USED TO OFFER AND SELL SECURITIES UNLESS IT IS ACCOMPANIED BY A PROSPECTUS SUPPLEMENT.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus and the documents included or incorporated by reference in this prospectus contain statements concerning our expectations, beliefs, plans, objectives, goals, strategies, future events or performance and underlying assumptions and other statements that are not historical facts. These statements are "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995. You generally can identify our forward-looking statements by the words "anticipate," "believe," "budgeted," "continue," "could," "estimate," "expect," "forecast," "goal," "intend," "may," "objective," "plan," "potential," "predict," "projection," "scheduled," "should," "will" or other similar words. These forward-looking statements include, among others, statements regarding:

* our growth strategies;

* our ability to explore for and develop natural gas and oil resources successfully and economically;

*our estimates of the timing and number of wells we expect to drill, other exploration activities and the cost of those activities;

- * changes in our drilling plans and related budgets;
- *the quality of our license areas with regard to, among other things, the existence of reserves in economic quantities;
 - * anticipated trends in our business;
 - * our future results of operations;
 - * our liquidity and our ability to raise capital to finance our exploration and development activities;
 - * our capital expenditure program;
 - * future market conditions in the oil and gas industry; and
 - * the impact of governmental regulation.

More specifically, our forward-looking statements include, among others, statements relating to our schedule, business plan, targets, estimates or results of future drilling, including the number, timing and results of wells, the timing and risk involved in drilling follow-up wells, planned expenditures, prospects budgeted and other future capital expenditures, risk profile of oil and gas exploration, acquisition of seismic data (including number, timing and size of projects), planned evaluation of prospects, probability of prospects having oil and natural gas, expected production or reserves, increases in reserves, acreage, working capital requirements, hedging activities, the ability of expected sources of liquidity to implement our business strategy, future hiring, future exploration activity, production rates, all and any other statements regarding future operations, financial results, business plans and cash needs and other statements that are not historical facts.

Such statements involve risks and uncertainties, including, but not limited to, those relating to our dependence on our exploratory drilling activities, the volatility of oil and natural gas prices, the need to replace reserves depleted by production, operating risks of oil and natural gas operations, our dependence on our key personnel, factors that affect our ability to manage our growth and achieve our business strategy, risks relating to our limited operating history, technological changes, our significant capital requirements, the potential impact of government regulations, adverse regulatory determinations, litigation, competition, the uncertainty of reserve information and future net revenue estimates, property acquisition risks, industry partner issues, availability of equipment, weather and other factors detailed herein and in our other filings with the SEC.

We have based our forward-looking statements on our management's beliefs and assumptions based on information available to our management at the time the statements are made. We caution you that assumptions, beliefs, expectations, intentions and projections about future events may and often do vary materially from actual results. Therefore, we cannot assure you that actual results will not differ materially from those expressed or implied by our forward-looking statements.

Some of the factors that could cause actual results to differ from those expressed or implied in forward-looking statements are described under "Risk Factors" in this prospectus and described under "Risk Factors" and elsewhere in our Annual Reports on Form 10-K for the fiscal years ended December 31, 2009 and 2008 and in our other periodic reports filed with the SEC. Should one or more of these risks or uncertainties materialize, or should underlying assumptions prove incorrect, actual outcomes may vary materially from those indicated. All subsequent written and oral forward-looking statements attributable to us or persons acting on our behalf are expressly qualified in their entirety by reference to these risks and uncertainties. You should not place undue reliance on our forward-looking statements. Each forward-looking statement speaks only as of the date of the particular statement, and we undertake

no duty to update any forward-looking statement.

SUMMARY

The following is only a summary, and does not contain all of the information that you need to consider in making your investment decision. We urge you to read this entire prospectus, including the more detailed financial statements, notes to the financial statements and other information incorporated by reference into this prospectus under "Where You Can Find More Information" and "Incorporation of Certain Information by Reference" from our other filings with the SEC, as well as any prospectus supplement applicable to an offering of the securities registered pursuant to the registration statement of which this prospectus forms a part. Investing in our securities involves risks. Therefore, please carefully consider the information provided under the heading "Risk Factors" beginning on page 10.

Our Company

Zion Oil and Gas, Inc. is a development stage oil and gas exploration company with a history of over nine years of oil and gas exploration in Israel. We have no revenues or operating income and we are classified as an "exploration stage" company. Our executive offices are located at 6510 Abrams Road, Suite 300, Dallas, Texas 75231, and our telephone number is (214) 221-4610. Our office in Israel is located at 15 Bareket Street, North Industrial Park Caesarea, 38900, Israel, and the telephone number is +972-4-623-1425. Our website is www.zionoil.com. We were incorporated in Florida on April 6, 2000 and reincorporated in Delaware on July 9, 2003.

We currently hold two exploration licenses covering approximately 162,100 acres onshore in the State of Israel between Netanya in the south and Haifa in the north. The areas have been subject to a series of exploration permits and licenses that have been granted to and held by us pursuant to the Israeli Petroleum Law. In June 2009, we were advised by the Israel Petroleum Commissioner that we were awarded a preliminary exploration permit with priority rights on approximately an additional 165,000 acres onshore Israel. The permit was formally awarded in August 2009 and allows us to conduct, on an exclusive basis through February 23, 2011, preliminary investigations, except for test drilling, to ascertain the prospects for discovering petroleum in the area covered by the permit. The permit area is adjacent to and to the east of our current license areas. The new permit, which we have named as the Issachar-Zebulun Permit, extends our petroleum rights from the Mediterranean at Caesarea across the Carmel Mountains to Megiddo and through to the Jordan River immediately south of the Sea of Galilee. The Issachar-Zebulun Permit allows us to conduct, on an exclusive basis through February 23, 2011, preliminary investigations to ascertain the prospects for discovering petroleum in the area covered by the permit. Unlike a license area, where test drilling may take place, no test drilling is allowed on a permit area.

Since April 2000, we have been conducting data accumulation, research and analysis related to onshore oil and gas potential in the northern portion of Israel's central coastal plain and the adjacent foothills region and Mt. Carmel range. In January 2008, we completed the acquisition of approximately 52.5 kilometers within the Asher-Menashe License area. Utilizing these seismic lines, along with other lines already existing in our Israeli country-wide seismic database, allowed us to better understand and interpret the geology of our license areas and select drill sites within the licenses. Our database consists of 219 seismic sections totaling 3,100 kilometers of coverage and also includes the stratigraphic sections from all the wells drilled in Israel.

To date, we have completed drilling two exploratory wells in the Joseph License area. The first exploratory well, named the Ma'anit #1 well, was drilled to a depth of 15,842 feet (4,829 meters) to the Triassic formation with encouraging but inconclusive results. However, notwithstanding these results, due to the mechanical condition of the well-bore, we determined that the well was incapable of producing oil and/or gas in commercial quantities and, consequently, in June 2007 we abandoned the well. In 2009, utilizing the 2,000 horsepower drilling rig which was refurbished to meet our needs and brought into Israel, we drilled an additional well (the Ma'anit-Rehoboth #2 well), 'directionally' form Ma'anit #1 well, to a depth of 17,913 feet (5,460 meters). The purpose of the Ma'anit-Rehoboth #2 well was to appraise the apparent findings of the Ma'anit #1 in the Triassic (at a depth of between approximately 12,000 and 15,400 feet) and to test the deeper Permian horizons at a depth of between approximately (16,000 and 18,000 feet). During the drilling, we had positive indications that the Ma'anit-Rehoboth #2 well contained hydrocarbon bearing zones, although we were only able to penetrate Triassic age formations and did not reach the Permian geological layer. At the site of the Ma'anit-Rehoboth #2 well, the Permian layer is significantly deeper than we anticipated. Subsequent to drilling the Ma'anit-Rehoboth #2 well and after analysis of all the data collected, we identified several 'zones of interest' warranting further investigation.

In December 2009, during a routine workover of the Ma'anit-Rehoboth #2 well, utilizing a work-over rig that was specifically refurbished for this purpose, we retrieved a small quantity of crude oil which came from the open hole section below the last casing point at 15,830 feet (4,825 meters). We are undertaking various testing procedures to clarify the recoverable hydrocarbon potential of the Ma'anit-Rehoboth #2 well, if any, in order to test the identified 'zones of interest' individually. At this stage, we are unsure as to whether we have made a discovery of any hydrocarbon reservoir or, if such a reservoir exists, whether it would be commercially viable. In February 2010, we began completion and production testing of the Ma'anit-Rehoboth #2 well.

On October 20, 2009, utilizing the 2,000 horsepower drilling rig used to drill our Ma'anit-Rehoboth #2 well, we commenced drilling an additional well (the Elijah #3 well). Under the terms of our license, the well must be drilled to a minimum depth of approximately 14,800 feet (4,500 meters) on the Asher-Menashe License. We targeted the Elijah #3 well to be drilled to the Triassic geological formation, which is expected below approximately 10,000 feet (3,048

meters). We also planned to continue drilling to the Permian geological formation, down to a total depth below 17,000 feet (5,182 meters). As of January 15, 2010, we drilled the Elijah #3 well to a depth of 10,938 feet (3,334 meters). In early February 2010 we temporarily suspended drilling operations in the well following our unsuccessful efforts to retrieve a stuck pipe. Following the decision to temporarily suspend drilling operations at the Elijah #3 well, we transferred the rig to the Ma'anit-Rehoboth #2 well to conduct testing procedures. We intend to resume drilling activity in the Elijah #3 well at the earliest appropriate time. See "Risk Factors" beginning on page 10.

We have finalized the location of our next drilling location (following Elijah #3 well) and plan to drill the Ma'anit-Joseph #3 well at a site approximately one kilometer to the south of the Ma'anit-Rehoboth #2 well. The drilling of the Ma'anit-Joseph #3 well is planned to test the Permian geological formation. We have started the permitting process and are in discussions with the owners of suitable drilling rigs.

We hold 100% of the working interest in our licenses and our permit, which means we are responsible for 100% of the costs of exploration and, if established, production. Our net revenue interest is 81.5%, which means we would receive 81.5% of the gross proceeds from the sale of oil and gas from license areas upon their conversion to production leases, if there is any commercial production. The 18.5% to which we are not entitled comprises (i) a 12.5% royalty reserved by the State of Israel and (ii) a overriding royalty interest (or equivalent net operating profits interest) of 6% of gross revenue from production given over to two charitable foundations. No royalty would be payable to any landowner with respect to production from our license areas as the State of Israel owns all the mineral rights. In addition, we may establish a key employee incentive plan that may receive an overriding royalty interest (or equivalent net operating profits interest) of up to 1.5%. In that event, our effective net revenue interest would be 80%.

Our ability to generate future revenues and operating cash flow will depend on the successful exploration and exploitation of our current and any future petroleum rights or the acquisition of oil and/or gas producing properties, the volume and timing of our production, as well as commodity prices for oil and gas. Such pricing factors are largely beyond our control, and may result in fluctuations in our earnings.

Our company's vision, as exemplified by its Founder and Chairman, John Brown, of finding oil and/or natural gas in Israel, is biblically inspired. The vision is based, in part, on biblical references alluding to the presence of oil and/or natural gas in territories within the State of Israel that were formerly within certain ancient biblical tribal areas. While John Brown provides the broad vision and goals for Zion, the actions taken by the Zion management as it actively explores for oil and gas in Israel are based on modern science and good business practice. Zion's oil and gas exploration activities are supported by appropriate geological and other science based studies and surveys typically carried out by companies engaged in oil and gas exploration activities.

Recent Financings

Since October 2008, we raised gross proceeds of approximately \$45,000,000 from the public offering of our securities for use in our operations, including drilling plans. Below is a brief summary of these offerings.

Between October 24, 2008 and January 9, 2009, we raised from a follow-on public offering gross proceeds of \$6,663,000 from the sale of units of our securities, of which \$240,000 was for debt conversion. Each unit offered in the follow-on offering consisted of (i) one share of common stock, par value \$.01 per share and (ii) one warrant to purchase one share of common stock at a per share exercise price equal to \$7.00.

In June 2009, we raised gross proceeds of \$21,000,000 from a rights offering to common stockholders of up to 4.2 million shares of our common stock. The rights offering commenced on May 4, 2009, following the declaration of the effectiveness of the registration statement filed with the SEC in respect of such offering. Under the rights offering, stockholders of record on the record date of May 4, 2009 of shares of the Company's common stock received, by way of a dividend, .375 of a subscription right for each share held as of such date (three subscription rights for each eight shares). Each whole subscription right entitled the shareholder to purchase one share of common stock at the purchase price of \$5.00 per share. The rights offering was fully subscribed, resulting in our distribution of all of the 4.2 million shares available, including 2,126,737 shares under the basic subscription privilege and 2,073,263 under the over-subscription privilege, representing a 51% basic subscription participation rate.

In November 2009, we raised an additional \$18,000,000 from a follow-on rights offering to common stockholders of up to 3.6 million shares of our common stock. The rights offering commenced on October 19, 2009, following the declaration of the effectiveness of the registration statement filed with the SEC in respect of the offering. Under the rights offering, stockholders of record on the record date of October 19, 2009 of shares of the Company's common stock received, by way of a dividend, .23 of a subscription right for each share held as of such date (twenty three subscription rights for each one hundred shares). Each whole subscription right entitled the shareholder to purchase one share of common stock at the purchase price of \$5.00 per share. The rights offering was fully subscribed, resulting in our distribution of all of the 3.6 million shares available, including 1,671,523 shares under the basic subscription privilege and 1,928,477under the over-subscription privilege, representing a 46% basic subscription participation rate.

The Securities We May Offer

We may offer shares of our common stock, various series of debt securities, warrants to purchase any of such securities and rights to purchase any of the foregoing securities, either individually or in units, with a total value of up to \$50,000,000 from time to time under this prospectus at prices and on terms to be determined by market conditions at the time of offering. This prospectus provides you with a general description of the securities we may offer. Each

time we offer a type or series of securities, we will provide a prospectus supplement that will describe the specific amounts, prices and other important terms of the securities, including, to the extent applicable:

- aggregate principal amount or aggregate offering price;
 - maturity, if applicable;
 - original issue discount, if any;
 - rates and times of payment of interest, if any;
- redemption, conversion, exchange or sinking fund terms, if any;
- •conversion or exchange prices or rates, if any, and, if applicable, any provisions for changes to or adjustments in the conversion or exchange prices or rates and in the securities or other property receivable upon conversion or exchange;

• ranking;

- restrictive covenants, if any;
- voting or other rights, if any; and
- important federal income tax considerations.

The prospectus supplement also may add, update or change information contained in this prospectus or in documents we have incorporated by reference into this prospectus. However, no prospectus supplement will offer a security that is not registered and described in this prospectus at the time of the effectiveness of the registration statement of which this prospectus is a part.

We may sell the securities directly to or through underwriters, dealers or agents. We, and our underwriters or agents, reserve the right to accept or reject all or part of any proposed purchase of securities. If we do offer securities through underwriters or agents, we will include in the applicable prospectus supplement:

- the names of those underwriters or agents;
- applicable fees, discounts and commissions to be paid to them;
 - details regarding over-allotment options, if any; and
 - the net proceeds to us.

The following is a summary of the securities we may offer with this prospectus.

Common Stock. We currently have authorized 50,000,000 shares of common stock, par value \$0.01 per share. We may offer shares of our common stock either alone or underlying other registered securities convertible into or exercisable for our common stock from time to time. Holders of our common stock are entitled to one vote per share for the election of directors and on all other matters that require stockholder approval. In the event of our liquidation, dissolution or winding up, holders of our common stock are entitled to share ratably in the assets remaining after payment of liabilities. Currently, we do not pay any dividends. Our common stock does not carry any preemptive rights enabling a holder to subscribe for, or receive shares of, any class of our common stock or any other securities convertible into shares of any class of our common stock, or any redemption rights.

Debt Securities . We may offer debt securities from time to time, in one or more series, as either senior or subordinated debt or as senior or subordinated convertible debt. The senior debt securities will rank equally with any other unsubordinated debt that we may have and may be secured or unsecured. The subordinated debt securities will be subordinate and junior in right of payment, to the extent and in the manner described in the instrument governing the debt, to all or some portion of our indebtedness. Any convertible debt securities that we issue will be convertible into or exchangeable for our common stock or other securities of ours. Conversion may be mandatory or at your option and would be at prescribed conversion rates.

The debt securities will be issued under one or more documents called indentures, which are contracts between us and a trustee for the holders of the debt securities. In this prospectus, we have summarized certain general and standard features of the debt securities we may issue. We urge you, however, to read the prospectus supplements related to the series of debt securities being offered, as well as the complete indentures that contain the terms of the debt securities. We will file as exhibits to the registration statement of which this prospectus is a part, or will incorporate

by reference into such registration statement from a Current Report on Form 8-K that we file with the SEC, the forms of indentures and any supplemental indentures and the forms of debt securities containing the terms of debt securities we are offering before the issuance of any series of debt pursuant to the Registration Statement of which this Prospectus forms a part.

Warrants. We may offer warrants for the purchase of our common stock, and/or debt securities in one or more series, from time to time. We may issue warrants independently or together with common stock, and/or debt securities, and the warrants may be attached to or separate from those securities.

The warrants will be evidenced by warrant certificates issued under one or more warrant agreements, which are contracts between us and an agent for the holders of the warrants. In this prospectus, we have summarized certain general and standard features of the warrants. We urge you, however, to read the prospectus supplements related to the series of warrants being offered, as well as the warrant agreements and warrant certificates that contain the terms of the warrants. We will file as exhibits to the registration statement of which this prospectus is a part, or will incorporate by reference into such registration statement from a Current Report on Form 8-K that we file with the SEC, the form of warrant agreements and form of warrant certificates relating to warrants for the purchase of common stock and debt securities we are offering before the issuance of any such warrants pursuant to the Registration Statement of which this Prospectus forms a part.

Units. We may offer units consisting of common stock, debt securities and/or warrants to purchase any of such securities in one or more series. In this prospectus, we have summarized certain general and standard features of the units. We urge you, however, to read the prospectus supplements related to the series of units being offered, as well as the unit agreements that contain the terms of the units. We will file as exhibits to the registration statement of which this prospectus is a part, or will incorporate by reference from a Current Report on Form 8-K that we file with the SEC, the form of unit agreement and any supplemental agreements that describe the terms of the series of units we are offering before the issuance of the related series of units pursuant to the Registration Statement of which this Prospectus forms a part.

We will evidence each series of units by unit certificates that we will issue under a separate agreement. We will enter into the unit agreements with a unit agent. Each unit agent will be a bank or trust company that we select. We will indicate the name and address of the unit agent in the applicable prospectus supplement relating to a particular series of units.

Rights . We may issue rights to purchase common stock or debt securities or warrants or any combination of the above securities of our company. We may issue rights independently or together with other securities. Rights sold with other securities as a unit may be attached to or separate from the other securities and may be (but shall not be required to be) publicly-listed securities. The rights may or may not be transferable by the persons purchasing or receiving the rights.

Each series of rights will be issued under a separate rights agent agreement to be entered into between us and one or more banks, trust companies or other financial institutions, as rights agent, that we will name in the applicable prospectus supplement. In this prospectus, we have summarized certain general and standard features of the rights. We urge you, however, to read the prospectus supplements related to the rights offering, as well as the relevant subscription documents. We will file as exhibits to the registration statement of which this prospectus is a part, or will incorporate by reference into such registration statement from a Current Report on Form 8-K that we file with the SEC, the form of subscription agreements and form of subscription certificates relating to rights for the purchase of common stock, debt securities and warrants we may then be offering before the issuance of any such rights or underlying securities pursuant to the Registration Statement of which this Prospectus forms a part.

THIS PROSPECTUS MAY NOT BE USED TO OFFER OR SELL ANY SECURITIES UNLESS ACCOMPANIED BY A PROSPECTUS SUPPLEMENT.

RISK FACTORS

Before making an investment decision, you should carefully consider the risks described under "Risks Related to our Business" below and in the applicable prospectus supplement, together with all of the other information appearing in this prospectus or incorporated by reference into this prospectus and any applicable prospectus supplement, in light of your particular investment objectives and financial circumstances. Our business, financial condition or results of operations could be materially adversely affected by any of these risks. The trading price of our securities could decline due to any of these risk factors, and you may lose all or any part of your investment.

Risks Related to our Business

We are an exploration stage company with no current source of income and, consequently, our financial condition has been unsound in the past and might again be so in the future.

We were incorporated in April 2000 and are still an exploration stage company. Our operations are subject to all of the risks inherent in exploration stage companies with no revenues or operating income. Our potential for success must be considered in light of the problems, expenses, difficulties, complications and delays frequently encountered in

connection with a new business, especially the oil and gas exploration business. We cannot warrant or provide any assurance that our business objectives will be accomplished. All of our audited financial statements since inception have contained a statement by management and by the auditors that raise substantial doubt about us being able to continue as a "going concern" unless we are able to raise additional capital.

We may require additional funds to drill additional wells.

Our planned work program is expensive. Following the raise of gross proceeds of \$21,000,000 from the rights offering that we completed in June 2009 and the additional \$18,000,000 from the second rights offering we completed in November 2009, we believe that our cash reserves are sufficient to enable us to maintain our operations as presently conducted through September 2010, including production testing the Ma'anit-Rehoboth #2 well and drilling our planned subsequent well, the Ma'anit-Joseph #3 well or the resumption of drilling of the Elijah #3 well. We have finalized the drilling location for the Ma'anit-Joseph #3 well and plan to drill it at a site approximately one kilometer to the south of the Ma'anit-Rehoboth #2 well. To continue our drilling program beyond that point, we will need to raise additional capital. We may also need to raise additional capital in order to take advantage of business opportunities that become available to us. We currently have no commitments for any financing and no assurance can be provided that we will be able to raise funds when needed.

In any event, any additional financing could cause your relative interest in our assets and potential earnings to be significantly diluted. Even if we have exploration success, we may not be able to generate sufficient revenues to offset the cost of dry holes and general and administrative expenses.

A substantial and extended decline in oil or natural gas prices could adversely impact our future rate of growth and the carrying value of our unproved oil & gas assets.

Prices for oil and natural gas fluctuate widely. Fluctuations in the prices of oil and natural gas will affect many aspects of our business, including our ability to attract capital to finance our operations, our cost of capital, and the value of our unproved oil and natural gas properties. Prices for oil and natural gas may fluctuate widely in response to relatively minor changes in the supply of and demand for oil and natural gas, market uncertainty and a wide variety of additional factors that are beyond our control, such as the domestic and foreign supply of oil and natural gas, the ability of members of the Organization of Petroleum Exporting Countries to agree to and maintain oil price and production controls, technological advances affecting energy consumption, and domestic and foreign governmental regulations. Significant and extended reductions in oil and natural gas prices could require us to reduce our capital expenditures and impair the carrying value of our assets.

If we are successful in finding commercial quantities of oil and/or gas, our revenues, operating results, financial condition and ability to borrow funds or obtain additional capital will depend substantially on prevailing prices for oil and natural gas. Declines in oil and gas prices may materially adversely affect our financial condition, liquidity, ability to obtain financing and operating results. Lower oil and gas prices also may reduce the amount of oil and gas that we could produce economically.

Historically, oil and gas prices and markets have been volatile, with prices fluctuating widely, and they are likely to continue to be volatile, making it impossible to predict with any certainty the future prices of oil and gas.

Subject to the completion of our testing procedures, we may incur substantial impairment write-down with respect to Ma'anit-Rehoboth #2 well and/or the Elijah #3 well.

We account for our oil and gas property costs using the full-cost method of accounting for oil and gas properties. Accordingly, all costs associated with acquisition, exploration and development of oil and gas reserves, including directly related overhead costs, are capitalized. We record an investment impairment charge when we believe an investment has experienced a decline in value that is other than temporary.

We drilled the Ma'anit-Rehoboth #2 well to a depth of 17,913 feet (5,460 meters). We are currently in the process of production testing the identified 'zones of interest' individually for recoverable hydrocarbons. We have resumed testing on the Ma'anit-Rehoboth #2 well in February 2010. We will either complete the well or, in the event we conclusively determine that the well is incapable of producing oil and/or gas in commercial quantities, then we will need to abandon the well and write off the costs accumulated to date.

As of the end of January 2010, we drilled the Elijah #3 well to a depth of 10,938 feet (3,334 meters). However, certain drill pipe became stuck in the well and the well has been temporarily suspended pending further analysis on how best to proceed.

Abandonment of properties is accounted for as adjustments to capitalized costs. The net capitalized costs are subject to a "ceiling test," which limits such costs to the aggregate of the estimated present value of future net revenues from proved reserves discounted at ten percent based on current economic and operating conditions, plus the lower of cost or fair market value of unproved properties. The recoverability of amounts capitalized for oil and gas properties is dependent upon the identification of economically recoverable reserves, together with obtaining the necessary

financing to exploit such reserves and the achievement of profitable operations.

We review our unproved oil and gas properties periodically to determine whether they have been impaired. An impairment allowance is provided on an unproved property when we determine that the property will not be developed. Any impairment charge incurred is recorded in accumulated depletion, impairment and amortization to reduce our recorded basis in the asset.

A failure to obtain extensions of our exploration licenses would have a material adverse effect on our business and prospects.

We currently hold two exploration licenses, the Asher-Menashe License and the Joseph License. The Asher-Menashe License has a three-year term, which commenced on June 10, 2007 and runs through June 9, 2010, which may be extended for up to an additional four years as provided by the Petroleum Law. The Joseph License has a three-year term, which commenced on October 11, 2007 and runs through October 10, 2010, which may be extended for an additional four years as provided by the Petroleum Law. We are currently in the process of obtaining an extension to each of these licenses from the Israel Petroleum Commissioner. While we anticipate that the extension will be granted, no assurance can be given that such extension will be forthcoming. The Israel Petroleum Commissioner's refusal to extend the license, or even a delay in their receipt, can have a material adverse effect on our business and prospects.

We have no proved reserves or current production and we may never have any.

We do not have any proved reserves or current production of oil or gas. We cannot assure you that any wells will be completed or produce oil or gas in commercially profitable quantities.

We have a history of losses and we cannot assure you that we will ever be profitable.

We incurred net losses of \$4,424,000, \$4,018,000 and \$13,047,000 for the years ended December 31, 2009, 2008 and 2007, respectively. The loss for the year ended December 31, 2007 included an impairment charge of \$9,494,000 to our unproved oil and gas properties. Our accumulated deficit as of December 31, 2009 was \$28,829,000. We cannot assure that we will ever be profitable.

Oil and gas exploration is an inherently risky business.

Exploratory drilling involves enormous risks, including the risk that no commercially productive oil or natural gas reservoirs will be discovered. Even when properly used and interpreted, seismic data analysis and other computer simulation techniques are only tools used to assist geoscientists in trying to identify subsurface structures and hydrocarbon indicators. They do not allow the interpreter to know conclusively if hydrocarbons are present or economically available. The risk analysis techniques we use in evaluating potential drilling sites rely on subjective judgments of our personnel and consultants.

Operating hazards and uninsured risks with respect to our oil and gas operations may have material adverse effects on our operations.

Our exploration and, if successful, development and production operations are subject to all of the risks normally incident to the exploration for and the development and production of oil and gas, including blowouts, cratering, uncontrollable flows of oil, gas or well fluids, fires, pollution and other environmental and operating risks. These hazards could result in substantial losses due to injury or loss of life, severe damage to or destruction of property and equipment, pollution and other environmental damage and suspension of operations. While as a matter of practice we take out insurance against some or all of these risks, such insurance may not cover the particular hazard and may not be sufficient to cover all losses. The occurrence of a significant event adversely affecting any of the oil and gas properties in which we have an interest could have a material adverse affect on us, could materially affect our continued operation and could expose us to material liability.

Political risks may adversely affect our operations and/or inhibit our ability to raise capital.

Our operations are concentrated in Israel and could be directly affected by political, economic and military conditions in Israel. Efforts to secure a lasting peace between Israel and its Arab neighbors and Palestinian residents have been underway since the State of Israel was established in 1948, and the future of these peace efforts is still uncertain.

Kibbutz Ma'anit (where we drilled our first well and drilled the Ma'anit-Rehoboth #2) is in an area adjacent to Israeli Arab towns where anti-Israeli rioting broke out in late 2000. On December 27, 2008, Israel began a military offensive against the Hamas terrorist organization infrastructure based in Gaza. (Gaza is in the south and our license areas are in the north of Israel.) Currently, a cease-fire is in effect. Any future armed conflict, political instability or continued violence in the region could have a negative effect on our operations and business conditions in Israel, as well as our ability to raise additional capital necessary for completion of our exploration program.

Economic risks may adversely affect our operations and/or inhibit our ability to raise additional capital.

Economically, our operations in Israel may be subject to:

- exchange rate fluctuations;
- •royalty and tax increases and other risks arising out of Israeli State sovereignty over the mineral rights in Israel and its taxing authority; and
 - changes in Israel's economy that could cause the legislation of oil and gas price controls.

Consequently, our operations may be substantially affected by local economic factors beyond our control, any of which could negatively affect our financial performance and prospects.

Legal risks could negatively affect the value of our Company.

Legally, our operations in Israel may be subject to:

- changes in the Petroleum Law resulting in modification of license and permit rights;
- adoption of new legislation relating to the terms and conditions pursuant to which operations in the energy sector may be conducted;

- changes in laws and policies affecting operations of foreign-based companies in Israel; and
- changes in governmental energy and environmental policies or the personnel administering them.

The Israeli Ministry of National Infrastructures is considering proposed legislation relating to licensing requirements for entities engaged in the fuel sector that, if adopted as currently proposed, may result in our having to obtain additional licenses to market and sell hydrocarbons that may be discovered by us. We have been advised by the Ministry that they do not intend to deprive a holder of petroleum rights under the Petroleum Law of its right under that law to sell hydrocarbons discovered and produced under its petroleum rights. We cannot now predict whether or in what form the proposed legislation may be adopted or, if adopted, its possible impact on our operations.

Further, in the event of a legal dispute in Israel, we may be subject to the exclusive jurisdiction of Israeli courts or we may not be successful in subjecting persons who are not United States residents to the jurisdiction of courts in the United States, either of which could adversely affect the outcome of a dispute.

The Ministry of Environmental Protection is considering proposed legislation relating to polluted materials, including their production, treatment, handling, storage and transportation, that may affect land or water resources. Persons engaged in activities involving these types of materials will be required to prepare environmental impact statements and remediation plans either prior to commencing activities or following the occurrence of an event that may cause pollution to land or water resources or endanger public health. We do now know and cannot predict whether any legislation in this area will be enacted and, if so, in what form and which of its provisions, if any, will relate to and affect our activities, how and to what extent.

Our petroleum rights (including licenses and permits) could be canceled, terminated or not extended, and we would not be able to successfully execute our business plan.

Any license or other petroleum right we hold or may be granted is granted for a fixed period and requires compliance with a work program detailed in the license or other petroleum right. If we do not fulfill the relevant work program due to inadequate funding or for any other reason, the Israeli government may terminate the license or any other petroleum right before its scheduled expiration date. No assurance can be provided that we will be able to obtain an extension to this if in fact we are unable to begin drilling by such date.

There are limitations on the transfer of interests in our petroleum rights, which could impair our ability to raise additional funds to execute our business plan.

The Israeli government has the right to approve any transfer of rights and interests in any license or other petroleum right we hold or may be granted and any mortgage of any license or other petroleum rights to borrow money. If we attempt to raise additional funds through borrowings or joint ventures with other companies and are unable to obtain required approvals from the government, the value of your investment could be significantly diluted or even lost.

Our dependence on the limited number of contractors, equipment and professional services available in Israel may result in increased costs and possibly material delays in our work schedule.

Due to the lack of competitive resources in Israel, costs for our operations may be more expensive than costs for similar operations in other parts of the world. We are also more likely to incur delays in our drilling schedule and be subject to a greater risk of failure in meeting our required work schedule. Similarly, some of the oil field personnel we need to undertake our planned operations are not necessarily available in Israel or available on short notice for work in Israel. Any or all of the factors specified above may result in increased costs and delays in the work schedule.

Our dependence on Israeli local licenses and permits may require more funds than we have budgeted and may cause delays in our work schedule.

In connection with drilling operations, we are subject to a number of Israeli local licenses and permits. Some of these are issued by the Israeli security forces, the Civil Aviation Authority, the Israeli Water Commission, the Israel Lands Authority, the holders of the surface rights in the lands on which we intend to conduct drilling operations, including Kibbutz Ma'anit, Kibbutz Ein Carmel, local and regional planning commissions, and environmental authorities.

The surface rights to the drill site on which we plan to drill the Ma'anit #3 well are held under a long-term lease by Kibbutz Ma'anit. The rights are owned by the State of Israel and administered by the Israel Lands Authority. Permission necessary to enter and use other drill sites to conduct petroleum operations has been previously granted to Zion by the Kibbutz in consideration for a monthly fee of \$350. Permission of the Israel Lands Authority for the use of the surface rights is also required, which permission the Israel Lands Authority is required to grant under the Petroleum Law. On August 14, 2008, the Authority granted the required permission for a two-year period (which period may be extended), subject to our paying a one time surface use fee of approximately \$455, signing a land use agreement and providing a bank guarantee in the amount of NIS 50,000 (approximately \$12,500). The use fee has been paid, the agreement signed and the bank guarantee provided.

The surface rights to the drill site on which we are drilling the Elijah #3 well are held under a long-term lease by Kibbutz Ein Carmel. The rights are owned by the State of Israel and administered by the Israel Lands Authority. Permission necessary to enter and use the drill site to conduct petroleum operations has been granted to Zion by the Kibbutz in consideration for a one-time fee of approximately \$124,000. Permission of the Israel Lands Authority for the use of the surface rights is also required, which permission the Israel Lands Authority is required to grant under the Petroleum Law. We are currently working with the Authority to finalize their approval.

In the event of a commercial discovery and depending on the nature of the discovery and the production and related distribution equipment necessary to produce and sell the discovered hydrocarbons, we will be subject to additional licenses and permits, including from various departments in the Ministry of National Infrastructures, regional and local planning commissions, the environmental authorities and the Israel Lands Authority. If we are unable to obtain some or all of these permits or the time required to obtain them is longer than anticipated, we may have to alter or delay our planned work schedule, which would increase our costs.

If we are successful in finding commercial quantities of oil and/or gas, our operations will be subject to laws and regulations relating to the generation, storage, handling, emission, transportation and discharge of materials into the environment, which can adversely affect the cost, manner or feasibility of our doing business. Many Israeli laws and regulations require permits for the operation of various facilities, and these permits are subject to revocation, modification and renewal. Governmental authorities have the power to enforce compliance with their regulations, and violations could subject us to fines, injunctions or both.

If compliance with environmental regulations is more expensive than anticipated, it could adversely impact the profitability of our business.

Risks of substantial costs and liabilities related to environmental compliance issues are inherent in oil and gas operations. It is possible that other developments, such as stricter environmental laws and regulations, and claims for damages to property or persons resulting from oil and gas exploration and production, would result in substantial costs and liabilities. This could also cause our insurance premiums to be significantly greater than anticipated.

Earnings will be diluted due to charitable contributions and key employee incentive plan.

We are committed to donating in the form of a royalty interest, 6% of our gross sales revenues, if any, to two charitable foundations. In addition, we may allocate 1.5% royalty interest or equivalent net operating profits interest to a key employee incentive plan designed as bonus compensation over and above our executive compensation payments. This means that the total royalty burden on our property (including the government royalty of 12.5%) may be up to 20%. As our expenses increase with respect to the amount of sales, these donations and allocation could significantly dilute future earnings and, thus, depress the price of the common stock.

The exercise of currently outstanding warrants and options may adversely affect the market price of our common stock

In connection with our follow on public offering completed in January 2009, we issued warrants to purchase up to 666,343 shares of our common stock at a per share exercise price of \$7.00, exercisable through January 31, 2012, of which 607,154 remain outstanding as of March 26, 2010. The shares underlying these warrants have been registered and, accordingly, any shares issued upon the exercise of these warrants will be immediately resalable on the open market. Additionally, we currently have employee stock options outstanding to purchase 444,549 shares of common stock at prices ranging between \$0.01 and \$8.25 per share.

The exercise or possibility of exercise of outstanding warrants and employee stock options could have an adverse effect on the market price for our common stock, and you may experience dilution to your holdings.

Risks Related to Our Stock

Our stock price and trading volume may be volatile, which could result in losses for our stockholders.

The equity trading markets have recently experienced high volatility resulting in highly variable and unpredictable pricing of equity securities. If the turmoil in the equity trading markets continues, the market for our common stock could change in ways that may or may not be related to our business, our industry or our operating performance and financial condition. In addition, the trading volume in our common stock may fluctuate and cause significant price variations to occur. Some of the factors that could negatively affect our share price or result in fluctuations in the price or trading volume of our common stock include:

^{*}actual or anticipated quarterly variations in our operating results, including further impairment to unproved oil and gas properties,

- * changes in expectations as to our future financial performance or changes in financial estimates, if any,
 - * announcements relating to our business,
 - * conditions generally affecting the oil and natural gas industry,
 - * the success of our operating strategy, and
 - * the operating and stock performance of other comparable companies.

Many of these factors are beyond our control, and we cannot predict their potential effects on the price of our common stock. In addition, the stock market is subject to extreme price and volume fluctuations. During the past fifty-two weeks, our stock price has fluctuated from an intraday low (on February 5, 2010) of \$4.95 to an intraday high of \$17.68 (on February 24, 2009). This volatility has had a significant effect on the market price of securities issued by many companies for reasons unrelated to their operating performance and could have the same effect on our common stock.

No assurance can be provided that you will be able to resell your shares of common stock at or above the price you acquired those shares in this offering. We cannot assure you that the market price of common stock will increase to the per share price at which the Unit was offered or that the market price of common stock will not fluctuate or decline significantly.

Future sales of our common stock may adversely affect the prevailing market price for our common stock.

We are authorized to issue up to 50,000,000 shares of common stock, of which there were 18,748,923 shares of our common stock outstanding as of March 26, 2010. An additional 1,557,154 shares of common stock have been reserved for issuance upon the exercise of outstanding warrants and options previously issued, or available for issue under the Employee Stock Option Plan (ESOP) including the warrants issued in connection with our follow-on public offering which terminated on January 9, 2009. The warrants for 607,154 shares of common stock that we issued in the context of our recently completed follow-on public offering became exercisable as of February 9, 2009 and, upon any such exercise of these warrants, we will issue freely tradable shares. As of January 28, 2010, the Company has issued 59,189 shares in respect of these warrant exercises. The exercise of these warrants and/or the issuance of additional shares of our common stock in connection with the above would dilute the interest in our company represented by each share of common stock and may adversely affect the prevailing market price of our common.

Cash dividends will not be paid to shareholders for the foreseeable future.

You may receive little or no cash or stock dividends on your shares of common stock. The board of directors has not directed the payment of any dividends, other than rights offering dividends, and does not anticipate paying dividends on the shares for the foreseeable future and intends to retain any future earnings to the extent necessary to develop and expand our business. Payment of cash dividends, if any, will depend, among other factors, on our earnings, capital requirements, and the general operating and financial condition, and will be subject to legal limitations on the payment of dividends out of paid-in capital.

USE OF PROCEEDS

Unless otherwise indicated in the prospectus supplement applicable to an offering, we intend to use any net proceeds from the sale of our securities to fund our operations and for other general corporate purposes, such as additions to working capital and expansion of our drilling efforts. We have not determined the amount of net proceeds to be used

specifically for the foregoing purposes.

When we offer a particular series of securities, we will describe the intended use of the net proceeds from that offering in a prospectus supplement. The actual amount of net proceeds we spend on a particular use will depend on many factors, including, our future capital expenditures, the amount of cash required by our operations, and our future revenue growth, if any. Therefore, we will retain broad discretion in the use of the net proceeds.

DESCRIPTION OF COMMON STOCK

Our authorized share capital consists of 50,000,000 shares of common stock, par value \$0.01 per share. As of March 26, 2010, there were 18,748,923 common shares outstanding. All outstanding shares of common stock are fully paid and non-assessable.

The following description of our common stock, together with any additional information we include in any applicable prospectus supplement, summarizes the material terms and provisions of our common stock that we may offer under this prospectus. While the terms we have summarized below will apply generally to any future common stock that we may offer, we will describe the particular terms of any class or series of these securities in more detail in the applicable prospectus supplement. For the complete terms of our common stock, please refer to our Articles of Incorporation and our bylaws that are incorporated by reference into the registration statement of which this prospectus is a part or may be incorporated by reference in this prospectus or any applicable prospectus supplement. The summary below and that contained in any applicable prospectus supplement are qualified in their entirety by reference to our Articles of Incorporation and bylaws.

Common Stock

Voting . Holders of shares of common stock are entitled to one vote for each share on all matters to be voted on by the stockholders. They are not entitled to cumulative voting rights.

Dividends and Other Distributions . Holders of our common stock are entitled to share in an equal amount per share in any dividends declared by our board of directors on the common stock and paid out of legally available assets.

Distributions on Dissolution . In the event of our liquidation, dissolution or winding up, holders of our common stock are entitled to share ratably in the assets remaining after payment of liabilities.

Other Rights. Our common stock does not carry any preemptive rights enabling a holder to subscribe for, or receive shares of, any class of our common stock or any other securities convertible into shares of any class of our common stock. There are no conversion or redemption rights or sinking funds provided for our stockholders.

Certificate of Incorporation and Bylaws Provisions

The following summary describes provisions of our certificate of incorporation and bylaws. They may have the effect of discouraging a tender offer, proxy contest or other takeover attempt that is opposed by our board of directors. These provisions include:

- restrictions on the rights of shareholders to remove directors;
- •limitations against shareholders calling a Special Meeting of shareholders or acting by unanimous written consent in lieu of a meeting;
- •requirements for advance notice of actions proposed by shareholders for consideration at meetings of the shareholders; and
 - restrictions on business combination transactions with "related persons."

Classified board of directors and removal

Our certificate of incorporation provides that the board of directors shall be divided into three classes, designated Class I, Class II and Class III, with the classes to be as nearly equal in number as possible. The term of office of each class expires at the third Annual Meeting of Shareholders for the election of directors following the election of such class (except for the initial classes). Directors may be removed only for cause and only upon the affirmative vote of holders of at least 66 2/3% of our voting stock at a Special Meeting of Shareholders called expressly for that purpose. The classification of directors could have the effect of making it more difficult for shareholders to change the composition of the board of directors. At least two Annual Meetings of Shareholders, instead of one, are generally required to effect a change in a majority of the board of directors.

The classification provisions could also have the effect of discouraging a third party from initiating a proxy contest, making a tender offer or otherwise attempting to obtain control of our company, even though such an attempt might be beneficial to us and our shareholders. The classification of the board of directors could thus increase the likelihood that incumbent directors will retain their positions. In addition, because the classification provisions may discourage accumulations of large blocks of stock by purchasers whose objective is to take control of our company and remove a majority of the board of directors, the classification of the board of directors could tend to reduce the likelihood of fluctuations in the market price of the common stock that might result from accumulations of large blocks. Accordingly, shareholders could be deprived of opportunities to sell their shares of common stock at a higher market price than might otherwise be the case.

Shareholder action by written consent and special meetings

Our bylaws provide that shareholder action can be taken only at an Annual or Special Meeting of shareholders and may not be taken by written consent in lieu of a meeting once our number of shareholders exceeded sixty, which occurred in the first quarter of 2003. Special Meetings of shareholders can be called only upon a resolution adopted by the board of directors. Moreover, the business permitted to be conducted at any Special Meeting of shareholders is limited to the business brought before the meeting under the Notice of Meeting given by us. These provisions may have the effect of delaying consideration of a shareholder proposal until the next Annual Meeting. These provisions would also prevent the holders of a majority of our voting stock from unilaterally using the written consent or Special Meeting procedure to take shareholder action.

Advance notice provisions for shareholder nominations and shareholder proposals

Our bylaws establish an advance notice procedure for shareholders to make nominations of candidates for election as directors or bring other business before a meeting of shareholders. The shareholder notice procedure provides that only persons who are nominated by, or at the direction of, the board of directors, or by a shareholder who has given timely written notice containing specified information to our secretary prior to the meeting at which directors are to be elected, will be eligible for election as our directors. The shareholder notice procedure also provides that at a meeting of the shareholders only such business may be conducted as has been brought before the meeting by, or at the direction of, the chairman of the board of directors, or in the absence of the chairman of the board, the chief executive officer, the president, or by a shareholder who has given timely written notice containing specified information to our secretary of such shareholder's intention to bring such business before such meeting.

Although our bylaws do not give the board of directors any power to approve or disapprove shareholder nominations for the election of directors or proposals for action, they may have the effect of precluding a contest for the election of directors or the consideration of shareholder proposals if the proper procedures are not followed, and of discouraging or deterring a third party from conducting a solicitation of proxies to elect its own slate of directors or to approve its own proposal, without regard to whether consideration of such nominees or proposals might be harmful or beneficial to Zion and our shareholders.

Business combination provision

Our certificate of incorporation contains a provision for approval of specified business combination transactions involving any person, entity or group that beneficially owns at least 10% of our aggregate voting stock. Such person, entity or group is sometimes referred to as a "related person". This provision requires the affirmative vote of the holders of not less than 66 2/3% of our voting stock to approve specified transactions between a related person and Zion, including:

- any merger or consolidation;
- any sale, lease, exchange, mortgage, pledge, transfer or other disposition of our assets having a fair market value of more than 10% of our total consolidated assets, or assets representing more than 10% of our cash flow or earning power, or 10% of stockholders' equity, which is referred to as a "substantial part";
- any sale, lease, exchange, mortgage, pledge, transfer or other disposition to or with us of all or a substantial part of the assets of a related person;
- any reclassification of securities, recapitalization, or any other transaction involving us that would have the effect of increasing the voting power of a related person;
- the adoption of a plan or proposal for our liquidation or dissolution proposed by or on behalf of a related person; and
- the entering into of any agreement, contract or other arrangement providing for any of the transactions described above.

This voting requirement will not apply to certain transactions, including any transaction approved by a majority vote of the directors (called "Disinterested Directors") who are not affiliated or associated with the related person described above, provided that there are at least three Disinterested Directors. This provision could have the effect of delaying or preventing a change in control of Zion in a transaction or series of transactions.

Liability of directors and indemnification

Our certificate of incorporation provides that a director will not be personally liable to us or our shareholders for breach of fiduciary duty as a director, except to the extent that such exemption or limitation of liability is not

permitted under Delaware General Corporation Law. Any amendment or repeal of such provisions may not adversely affect any right or protection of a director existing under our certificate of incorporation for any act or omission occurring prior to such amendment or repeal.

Our certificate of incorporation and bylaws provide that each person who at any time serves or served as one of our directors or officers, or any person who, while one of our directors or officers, is or was serving at our request as a director or officer of another corporation, partnership, joint venture, trust or other enterprise, is entitled to indemnification and the advancement of expenses from us, to the fullest extent permitted by applicable Delaware law. However, as provided under applicable Delaware General Corporation Law, this indemnification will only be provided if the indemnitee acted in good faith and in a manner he or she reasonably believed to be in, or not opposed to, the best interests of our company.

Amendments

Our certificate of incorporation provides that we reserve the right to amend, alter, change, or repeal any provision contained in our certificate of incorporation, and all rights conferred to shareholders are granted subject to such reservation. The affirmative vote of holders of not less than 80% of our voting stock, voting together as a single class, is required to alter, amend, adopt any provision inconsistent with, or to repeal certain specified provisions of our certificate of incorporation. However, the 80% vote described in the prior sentence is not required for any alteration, amendment, adoption of inconsistent provision or repeal of the "business combination" provision discussed under the "Business combination provision" paragraph above which is recommended to the shareholders by two-thirds of our Disinterested Directors, and such alteration, amendment, adoption of inconsistent provision or repeal shall require the vote, if any, required under the applicable provisions of the Delaware General Corporation Law, our certificate of incorporation and our bylaws. In addition, our bylaws provide that shareholders may only adopt, amend or repeal our bylaws by the affirmative vote of holders of not less than 66-2/3% of our voting stock, voting together as a single class. Our bylaws may also be amended by the affirmative vote of two-thirds of our board of directors.

Listing Symbols on the NASDAQ Global Market

Shares of our common stock and our common stock purchase warrants have, since September 2, 2009, been trading on the NASDAQ Global Market under the symbols "ZN" and "ZNWAW". From January 3, 2007 and through September 1, 2009, shares of our common stock were traded on the NYSE Amex, under the symbol "ZN" and from February 9, 2008 through September 1, 2009 our common stock purchase warrants were traded on NYSE Amex under the symbol "ZN.WS. The last sale price of our common stock on the NASDAQ Global Market on March 25, 2010 was \$ 6.31 ...

Transfer Agent and Registrar

The transfer agent and registrar for our common stock is Registrar and Transfer Company, Cranford, New Jersey.

DESCRIPTION OF DEBT SECURITIES

The following description, together with the additional information we include in any applicable prospectus supplements, summarizes the general terms and provisions of the debt securities that we may offer under this prospectus. While the terms we have summarized below will generally apply to any future debt securities we may offer under this prospectus, we will describe the particular terms of any debt securities that we may offer in more detail in the applicable prospectus supplement. The terms of any debt securities we offer under a prospectus supplement may differ from the terms we describe below. However, no prospectus supplement shall fundamentally change the terms that are set forth in this prospectus or offer a security that is not registered and described in this prospectus at the time of its effectiveness. As of the date of this prospectus, we have no outstanding registered debt securities.

We may issue one or more series of notes under indentures, which we will enter into with the trustee to be named therein. If we issue debt securities, we will file these documents as exhibits to the registration statement of which this prospectus is a part, or incorporate them by reference from a Current Report on Form 8-K that we file with the SEC. We use the term "indentures" to refer to any and all indentures that we may enter into with respect to debt securities issued and sold pursuant to this Registration Statement.

The indentures will be qualified under the Trust Indenture Act of 1939. We use the term "debenture trustee" to refer to either the senior trustee or the subordinated trustee, as applicable.

The following summaries of material provisions of the debt securities are subject to, and qualified in their entirety by reference to, all the provisions of the indenture applicable to a particular series of debt securities. We urge you to read the applicable prospectus supplements related to the debt securities that we sell under this prospectus, as well as the complete indentures that contain the terms of the debt securities. Except as we may otherwise indicate, the terms of the senior and the subordinated indentures are identical.

General

The indentures may limit the aggregate principal amount of the debt securities which we may issue and will provide that we may issue the debt securities from time to time in one or more series. The indentures may or may not limit the amount of our other indebtedness or the debt securities which we or our subsidiaries may issue. The particular terms of each series of debt securities will be described in a prospectus supplement relating to such series, including any pricing supplement. The prospectus supplement will set forth:

• the title;

- the principal amount being offered, and, if a series, the total amount authorized and the total amount outstanding;
 - any limit on the amount that may be issued;
- whether or not we will issue the series of debt securities in global form and, if so, the terms and who the depositary will be;
 - the maturity date;
- whether and under what circumstances, if any, we will pay additional amounts on any debt securities held by a person who is not a United States person for tax purposes, and whether we can redeem the debt securities if we have to pay such additional amounts;
- the annual interest rate, which may be fixed or variable, or the method for determining the rate, the date interest will begin to accrue, the dates interest will be payable and the regular record dates for interest payment dates or the method for determining such dates;

• whether or not the debt securities will be secured or unsecured, and the terms of any secured debt;
• the terms of the subordination of any series of subordinated debt;
• the place where payments will be payable;
• restrictions on transfer, sale or other assignment, if any;
• our right, if any, to defer payment of interest and the maximum length of any such deferral period;
•the date, if any, after which, the conditions upon which, and the price at which we may, at our option, redeem the series of debt securities pursuant to any optional or provisional redemption provisions, and any other applicable terms of those redemption provisions;
• the date, if any, on which, and the price at which we are obligated, pursuant to any mandatory sinking fund or analogous fund provisions or otherwise, to redeem, or at the holder's option to purchase, the series of debt securities and the currency or currency unit in which the debt securities are payable;
• whether the indenture will restrict our ability and/or the ability of our subsidiaries to:
• incur additional indebtedness;
• issue additional securities;
• create liens;
 pay dividends and make distributions in respect of our capital stock; redeem capital stock;
• place restrictions on our subsidiaries' ability to pay dividends, make distributions or transfer assets;
• make investments or other restricted payments;
• sell or otherwise dispose of assets;
• enter into sale-leaseback transactions;
• engage in transactions with stockholders and affiliates;
• issue or sell stock of our subsidiaries; or
• effect a consolidation or merger;

- whether the indenture will require us to maintain any interest coverage, fixed charge, cash flow-based, asset-based or other financial ratios;
- a discussion of any material or special United States federal income tax considerations applicable to the debt securities;

- information describing any book-entry features;
- provisions for a sinking fund purchase or other analogous fund, if any;
- whether the debt securities are to be offered at a price such that they will be deemed to be offered at an "original issue discount" as defined in paragraph (a) of Section 1273 of the Internal Revenue Code;
 - the procedures for any auction and remarketing, if any;
- the denominations in which we will issue the series of debt securities, if other than denominations of \$1,000 and any integral multiple thereof;

- if other than dollars, the currency in which the series of debt securities will be denominated; and
- any other specific terms, preferences, rights or limitations of, or restrictions on, the debt securities, including any events of default that are in addition to those described in this prospectus or any covenants provided with respect to the debt securities that are in addition to those described above, and any terms which may be required by us or advisable under applicable laws or regulations or advisable in connection with the marketing of the debt securities.

Conversion or Exchange Rights

We will set forth in the prospectus supplement the terms on which a series of debt securities may be convertible into or exchangeable for common stock or other securities of ours or a third party, including the conversion or exchange rate, as applicable, or how it will be calculated, and the applicable conversion or exchange period. We will include provisions as to whether conversion or exchange is mandatory, at the option of the holder or at our option. We may include provisions pursuant to which the number of our securities or the securities of a third party that the holders of the series of debt securities receive upon conversion or exchange would, under the circumstances described in those provisions, be subject to adjustment, or pursuant to which those holders would, under those circumstances, receive other property upon conversion or exchange, for example in the event of our merger or consolidation with another entity.

Consolidation, Merger or Sale

The description of the debt securities in the prospectus supplement or the indentures may provide that we may not consolidate or amalgamate with or merge into any person or convey, transfer or lease our properties or assets as an entirety or substantially as an entirety to any person, and we may not permit any person to consolidate or amalgamate with or merge into us, or convey, transfer or lease its properties and assets as an entirety or substantially as an entirety to us, unless:

- immediately after giving effect to the transaction, no event of default, and no event which after notice or lapse of time or both would become an event of default, will have occurred and be continuing; and
 - certain other conditions are met.

If the debt securities are convertible for our other securities, the person with whom we consolidate or merge or to whom we sell all of our property must make provisions for the conversion of the debt securities into securities that the holders of the debt securities would have received if they had converted the debt securities before the consolidation, merger or sale.

Events of Default Under the Indenture

Each of the following constitute reasonably standard events of default that may be included in any finalized indenture or prospectus supplement as constituting an event of default with respect to any series of debt securities that we may issue:

- if we fail to pay interest when due and payable and our failure continues for 30 days and the time for payment has not been extended or deferred;
- if we fail to pay the principal, sinking fund payment or premium, if any, when due and payable and the time for payment has not been extended or delayed;

•

if we fail to observe or perform any other covenant contained in the debt securities or the indentures, other than a covenant specifically relating to another series of debt securities, and our failure continues for 90 days after we receive notice from the debenture trustee or holders of at least 25% in aggregate principal amount of the outstanding debt securities of the applicable series;

- if specified events of bankruptcy, insolvency or reorganization occur; and
- any other event of default provided in or pursuant to the applicable indenture or prospectus supplement with respect to the debt securities of that series.

If an event of default with respect to debt securities of any series occurs and is continuing, other than an event of default in the event of bankruptcy, insolvency or reorganization, the debenture trustee or the holders of at least 25% in aggregate principal amount of the outstanding debt securities of that series, by notice to us in writing, and to the debenture trustee if notice is given by such holders, may declare the unpaid principal of, premium, if any, and accrued interest, if any, due and payable immediately. If an event of default due to bankruptcy, insolvency or reorganization occurs with respect to us, the principal amount of and accrued interest, if any, of each issue of debt securities then outstanding shall be due and payable without any notice or other action on the part of the debenture trustee or any holder.

The holders of a majority in principal amount of the outstanding debt securities of an affected series may waive any default or event of default with respect to the series and its consequences, except defaults or events of default regarding payment of principal, premium, if any, or interest, unless we have cured the default or event of default in accordance with the indenture.

Subject to the terms of the indentures, if an event of default under an indenture shall occur and be continuing, the debenture trustee will be under no obligation to exercise any of its rights or powers under such indenture at the request or direction of any of the holders of the applicable series of debt securities, unless such holders have offered the debenture trustee reasonable indemnity. The holders of a majority in principal amount of the outstanding debt securities of any series will have the right to direct the time, method and place of conducting any proceeding for any remedy available to the debenture trustee, or exercising any trust or power conferred on the debenture trustee, with respect to the debt securities of that series, provided that:

- the direction so given by the holder is not in conflict with any law or the applicable indenture; and
- subject to its duties under the Trust Indenture Act of 1939, the debenture trustee need not take any action that might involve it in personal liability or might be unduly prejudicial to the holders not involved in the proceeding.

A holder of the debt securities of any series will only have the right to institute a proceeding under the indentures or to appoint a receiver or trustee, or to seek other remedies if:

- the holder has given written notice to the debenture trustee of a continuing event of default with respect to that series;
- the holders of at least 25% in aggregate principal amount of the outstanding debt securities of that series have made written request, and such holders have offered reasonable indemnity to the debenture trustee to institute the proceeding as trustee; and
- the debenture trustee does not institute the proceeding, and does not receive from the holders of a majority in aggregate principal amount of the outstanding debt securities of that series other conflicting directions within 90 days after the notice, request and offer.

These limitations do not apply to a suit instituted by a holder of debt securities if we default in the payment of the principal, premium, if any, or interest on, the debt securities.

We will periodically file statements with the debenture trustee regarding our compliance with specified covenants in the indentures.

Modification of Indenture; Waiver

We and the debenture trustee may change an indenture without the consent of any holders with respect to specific matters, including:

- to fix any ambiguity, defect or inconsistency in the indenture;
- to comply with the provisions described above under "Consolidation, Merger or Sale";
- to comply with any requirements of the SEC in connection with the qualification of any indenture under the Trust Indenture Act of 1939;

- to evidence and provide for the acceptance of appointment by a successor trustee;
- to provide for uncertificated debt securities and to make all appropriate changes for such purpose;
- •to add to, delete from, or revise the conditions, limitations and restrictions on the authorized amount, terms or purposes of issuance, authorization and delivery of debt securities or any series, as set forth in the indenture;
 - to provide for the issuance of and establish the form and terms and conditions of the debt securities of any series as provided under "General," to establish the form of any certifications required to be furnished pursuant to the terms of the indenture or any series of debt securities, or to add to the rights of the holders of any series of debt securities;
- •to add to our covenants such new covenants, restrictions, conditions or provisions for the protection of the holders, to make the occurrence, or the occurrence and the continuance, of a default in any such additional covenants, restrictions, conditions or provisions an event of default, or to surrender any of our rights or powers under the indenture; or
- •to change anything that does not materially adversely affect the interests of any holder of debt securities of any series.

In addition, under the indentures, the rights of holders of a series of debt securities may be changed by us and the debenture trustee with the written consent of the holders of at least a majority in aggregate principal amount of the outstanding debt securities of each series that is affected. However, we and the debenture trustee may only make the following changes with the consent of each holder of any outstanding debt securities affected:

- extending the fixed maturity of the series of debt securities;
- reducing the principal amount, reducing the rate of or extending the time of payment of interest, or reducing any premium payable upon the redemption of any debt securities; or
- •reducing the percentage of debt securities, the holders of which are required to consent to any amendment, supplement, modification or waiver.

Discharge

Each indenture will provide that we can elect to be discharged from our obligations with respect to one or more series of debt securities, except for obligations to:

- register the transfer or exchange of debt securities of the series;
- replace stolen, lost or mutilated debt securities of the series;
 - maintain paying agencies;
 - hold monies for payment in trust;
 - recover excess money held by the debenture trustee;
 - compensate and indemnify the debenture trustee; and
 - appoint any successor trustee.

In order to exercise our rights to be discharged, we must deposit with the debenture trustee money or government obligations sufficient to pay all the principal of, any premium, if any, and interest on, the debt securities of the series on the dates payments are due.

Form, Exchange and Transfer

We will issue the debt securities of each series only in fully registered form without coupons and, unless we otherwise specify in the applicable prospectus supplement, in denominations of \$1,000 and any integral multiple thereof. The indenture will provide that we may issue debt securities of a series in temporary or permanent global form and as book-entry securities that will be deposited with, or on behalf of, The Depository Trust Company, New York, New York, known as DTC, or another depositary named by us and identified in a prospectus supplement with respect to that series. See "Legal Ownership of Securities" for a further description of the terms relating to any book-entry securities.

At the option of the holder, subject to the terms of the indentures and the limitations applicable to global securities described in the applicable prospectus supplement, the holder of the debt securities of any series can exchange the debt securities for other debt securities of the same series, in any authorized denomination and of like tenor and

aggregate principal amount.

Subject to the terms of the indentures and the limitations applicable to global securities set forth in the applicable prospectus supplement, holders of the debt securities may present the debt securities for exchange or for registration of transfer, duly endorsed or with the form of transfer endorsed thereon duly executed if so required by us or the security registrar, at the office of the security registrar or at the office of any transfer agent designated by us for this purpose. Unless otherwise provided in the debt securities that the holder presents for transfer or exchange, we will make no service charge for any registration of transfer or exchange, but we may require payment of any taxes or other governmental charges.

We will name in the applicable prospectus supplement the security registrar, and any transfer agent in addition to the security registrar, that we initially designate for any debt securities. We may at any time designate additional transfer agents or rescind the designation of any transfer agent or approve a change in the office through which any transfer agent acts, except that we will be required to maintain a transfer agent in each place of payment for the debt securities of each series.

If we elect to redeem the debt securities of any series, we will not be required to:

- issue, register the transfer of, or exchange any debt securities of any series being redeemed in part during a period beginning at the opening of business 15 days before the day of mailing of a notice of redemption of any debt securities that may be selected for redemption and ending at the close of business on the day of the mailing; or
- •register the transfer of or exchange any debt securities so selected for redemption, in whole or in part, except the unredeemed portion of any debt securities we are redeeming in part.

Information Concerning the Debenture Trustee

The debenture trustee, other than during the occurrence and continuance of an event of default under an indenture, will undertake to perform only those duties as are specifically set forth in the applicable indenture. Upon an event of default under an indenture, the debenture trustee must use the same degree of care as a prudent person would exercise or use in the conduct of his or her own affairs. Subject to this provision, the debenture trustee is under no obligation to exercise any of the powers given it by the indentures at the request of any holder of debt securities unless it is offered reasonable security and indemnity against the costs, expenses and liabilities that it might incur.

Payment and Paying Agents

Unless we otherwise indicate in the applicable prospectus supplement, we will make payment of the interest on any debt securities on any interest payment date to the person in whose name the debt securities, or one or more predecessor securities, are registered at the close of business on the regular record date for the interest.

We will pay principal of and any premium and interest on the debt securities of a particular series at the office of the paying agents designated by us, except that, unless we otherwise indicate in the applicable prospectus supplement, we may make interest payments by check which we will mail to the holder or by wire transfer to certain holders. Unless we otherwise indicate in a prospectus supplement, we will designate the corporate office of the debenture trustee in the City of New York as our sole paying agent for payments with respect to debt securities of each series. We will name in the applicable prospectus supplement any other paying agents that we initially designate for the debt securities of a particular series. We will maintain a paying agent in each place of payment for the debt securities of a particular series.

All money we pay to a paying agent or the debenture trustee for the payment of the principal of or any premium or interest on any debt securities which remains unclaimed at the end of two years after such principal, premium or interest has become due and payable will be repaid to us, and the holder of the debt security thereafter may look only to us for payment thereof.

Subordination of Subordinated Debt Securities

The subordinated debt securities will be subordinate and junior in priority of payment to certain of our other indebtedness to the extent described in a prospectus supplement. The indentures will not limit the amount of indebtedness which we may incur, including senior indebtedness or subordinated indebtedness, and will not limit us from issuing any other debt, including secured debt or unsecured debt.

DESCRIPTION OF WARRANTS

The following description, together with the additional information we may include in any applicable prospectus supplements, summarizes the material terms and provisions of the warrants that we may offer under this prospectus.

While the terms we have summarized below will apply generally to any warrants that we may offer under this prospectus, we will describe the particular terms of any series of warrants in more detail in the applicable prospectus supplement. The terms of any warrants offered under a prospectus supplement may differ from the terms described below. However, no prospectus supplement will fundamentally change the terms that are set forth in this prospectus or offer a security that is not registered and described in this prospectus at the time of its effectiveness.

We will file as exhibits to the registration statement of which this prospectus is a part, or will incorporate by reference from a Current Report on Form 8-K that we file with the SEC, the form of warrant agreement, including a form of warrant certificate, that describes the terms of the particular series of warrants we are offering before the issuance of the related series of warrants. The following summaries of material provisions of the warrants and the warrant agreements are subject to, and qualified in their entirety by reference to, all the provisions of the warrant agreement and warrant certificate applicable to a particular series of warrants. We urge you to read the applicable prospectus supplements related to the particular series of warrants that we sell under this prospectus, as well as the complete warrant agreements and warrant certificates that contain the terms of the warrants.

General

We will describe in the applicable prospectus supplement the terms relating to a series of warrants, including:

- the offering price and aggregate number of warrants offered;
 - the currency for which the warrants may be purchased;
- if applicable, the designation and terms of the securities with which the warrants are issued and the number of warrants issued with each such security or each principal amount of such security;
- if applicable, the date on and after which the warrants and the related securities will be separately transferable;
- in the case of warrants to purchase debt securities, the principal amount of debt securities purchasable upon exercise of one warrant and the price at which, and currency in which, this principal amount of debt securities may be purchased upon such exercise;
- •in the case of warrants to purchase common stock, the number of shares of common stock may be, purchasable upon the exercise of one warrant and the price at which these shares may be purchased upon such exercise;
- the effect of any merger, consolidation, sale or other disposition of our business on the warrant agreements and the warrants;
 - the terms of any rights to redeem or call the warrants;
- any provisions for changes to or adjustments in the exercise price or number of securities issuable upon exercise of the warrants;
 - the dates on which the right to exercise the warrants will commence and expire;
 - the manner in which the warrant agreements and warrants may be modified;
 - federal income tax consequences of holding or exercising the warrants;
 - the terms of the securities issuable upon exercise of the warrants; and
 - any other specific terms, preferences, rights or limitations of or restrictions on the warrants.

Before exercising their warrants, holders of warrants will not have any of the rights of holders of the securities purchasable upon such exercise, including:

• in the case of warrants to purchase debt securities, the right to receive payments of principal of, or premium, if any, or interest on, the debt securities purchasable upon exercise or to enforce covenants in the applicable indenture; or

Exercise of Warrants

Each warrant will entitle the holder to purchase the securities that we specify in the applicable prospectus supplement at the exercise price that we describe in the applicable prospectus supplement. Unless we otherwise specify in the applicable prospectus supplement, holders of the warrants may exercise the warrants at any time up to the specified time on the expiration date that we set forth in the applicable prospectus supplement. After the close of business on the expiration date, unexercised warrants will become void.

Holders of the warrants may exercise the warrants by delivering the warrant certificate representing the warrants to be exercised together with specified information, and paying the required amount to the warrant agent in immediately available funds, as provided in the applicable prospectus supplement. We will set forth on the reverse side of the warrant certificate and in the applicable prospectus supplement the information that the holder of the warrant will be required to deliver to the warrant agent.

Upon receipt of the required payment and the warrant certificate properly completed and duly executed at the corporate trust office of the warrant agent or any other office indicated in the applicable prospectus supplement, we will issue and deliver the securities purchasable upon such exercise. If fewer than all of the warrants represented by the warrant certificate are exercised, then we will issue a new warrant certificate for the remaining amount of warrants. If we so indicate in the applicable prospectus supplement, holders of the warrants may surrender securities as all or part of the exercise price for warrants.

Enforceability of Rights by Holders of Warrants

Each warrant agent will act solely as our agent under the applicable warrant agreement and will not assume any obligation or relationship of agency or trust with any holder of any warrant. A single bank or trust company may act as warrant agent for more than one issue of warrants. A warrant agent will have no duty or responsibility in case of any default by us under the applicable warrant agreement or warrant, including any duty or responsibility to initiate any proceedings at law or otherwise, or to make any demand upon us. Any holder of a warrant may, without the consent of the related warrant agent or the holder of any other warrant, enforce by appropriate legal action its right to exercise, and receive the securities purchasable upon exercise of, its warrants.

DESCRIPTION OF UNITS

The following description, together with the additional information we may include in any applicable prospectus supplements, summarizes the material terms and provisions of the units that we may offer under this prospectus. While the terms we have summarized below will apply generally to any units that we may offer under this prospectus, we will describe the particular terms of any series of units in more detail in the applicable prospectus supplement. The terms of any units offered under a prospectus supplement may differ from the terms described below. However, no prospectus supplement will fundamentally change the terms that are set forth in this prospectus or offer a security that is not registered and described in this prospectus at the time of its effectiveness.

We will file as exhibits to the registration statement of which this prospectus is a part, or will incorporate by reference from a Current Report on Form 8-K that we file with the SEC, the form of unit agreement that describes the terms of the series of units we are offering, and any supplemental agreements, before the issuance of the related series of units. The following summaries of material terms and provisions of the units are subject to, and qualified in their entirety by reference to, all the provisions of the unit agreement and any supplemental agreements applicable to a particular series of units. We urge you to read the applicable prospectus supplements related to the particular series of units that we sell under this prospectus, as well as the complete unit agreement and any supplemental agreements that contain the terms of the units.

General

We may issue units comprised of one or more debt securities, shares of common stock and warrants in any combination. Each unit will be issued so that the holder of the unit is also the holder of each security included in the unit. Thus, the holder of a unit will have the rights and obligations of a holder of each included security. The unit agreement under which a unit is issued may provide that the securities included in the unit may not be held or transferred separately, at any time or at any time before a specified date.

We will describe in the applicable prospectus supplement the terms of the series of units, including:

- the designation and terms of the units and of the securities comprising the units, including whether and under what circumstances those securities may be held or transferred separately;
 - any provisions of the governing unit agreement that differ from those described below; and
- any provisions for the issuance, payment, settlement, transfer or exchange of the units or of the securities comprising the units.

The provisions described in this section, as well as those described under "Description of Capital Stock," "Description of Debt Securities" and "Description of Warrants" will apply to each unit and to any common stock, debt security or warrant

included in each unit, respectively.

Issuance in Series

We may issue units in such amounts and in numerous distinct series as we determine.

Enforceability of Rights by Holders of Units

Each unit agent will act solely as our agent under the applicable unit agreement and will not assume any obligation or relationship of agency or trust with any holder of any unit. A single bank or trust company may act as unit agent for more than one series of units. A unit agent will have no duty or responsibility in case of any default by us under the applicable unit agreement or unit, including any duty or responsibility to initiate any proceedings at law or otherwise, or to make any demand upon us. Any holder of a unit may, without the consent of the related unit agent or the holder of any other unit, enforce by appropriate legal action its rights as holder under any security included in the unit.

Title

We, the unit agents and any of their agents may treat the registered holder of any unit certificate as an absolute owner of the units evidenced by that certificate for any purpose and as the person entitled to exercise the rights attaching to the units so requested, despite any notice to the contrary. See "Legal Ownership of Securities."

DESCRIPTION OF RIGHTS

The following description, together with the additional information we may include in any applicable prospectus supplements, summarizes the material terms and provisions of the rights we may issue from time to time. While the terms we have summarized below will apply generally to any rights that we may offer under this prospectus, we will describe the particular terms of any rights offering in more detail in the applicable prospectus supplement. The terms of any rights offering under a prospectus supplement may differ from the terms described below. However, no prospectus supplement will fundamentally change the terms that are set forth in this prospectus or offer a security that is not registered and described in this prospectus at the time of its effectiveness.

We will file as exhibits to the registration statement of which this prospectus is a part, or will incorporate by reference from a Current Report on Form 8-K that we file with the SEC, the form of subscription rights agreement, including a form of rights certificate, that describes the terms of the particular rights we are offering before the issuance of securities. The following summaries of material provisions of the rights and the subscription agreements are subject to, and qualified in their entirety by reference to, all the provisions of the subscription agreement and subscription certificates applicable to a particular rights offering. We urge you to read the applicable prospectus supplements related to the securities that we sell under this prospectus, as well as the complete subscription agreements and subscription certificates that contain the terms of the subscription rights.

General

We may issue rights to purchase one or more of our securities. Rights may be issued independently or together with other securities and may or may not be transferable by the person purchasing or receiving the rights. In connection with any rights offering to our stockholders, we may enter into a standby underwriting, backstop or other arrangement with one or more underwriters or other persons pursuant to which such underwriters or other persons would purchase any offered securities remaining unsubscribed for after such rights offering. In connection with a rights offering to our stockholders, we would distribute certificates evidencing the rights and a prospectus supplement to our stockholders on or about the record date that we set for receiving rights in such rights offering.

The applicable prospectus supplement will describe the following terms of any rights we may issue, including the following:

- the title and aggregate number of the rights;
- the subscription price or a formula for the determination of the subscription price for the rights and the currency or currencies in which the subscription price may be payable;
- •f applicable, the designation and terms of the securities with which the rights are issued and the number of rights issued with each such security or each principal amount of such security;
 - the number or a formula for the determination of the number of the rights issued to each stockholder;
 - the extent to which the rights are transferable;

•n the case of rights to purchase debt securities, the principal amount of debt securities purchasable upon exercise of one right;

•n the case of rights to purchase common stock, the number of shares of common stock purchasable upon exercise of one right;

the date on which the right to exercise the rights will commence, and the date on which the rights will expire (subject to any extension);

- if applicable, the minimum or maximum amount of the rights that may be exercised at any one time;
- the extent to which such rights include an over-subscription privilege with respect to unsubscribed securities;

•f applicable, the procedures for adjusting the subscription price and number of shares of common stock purchasable upon the exercise of each right upon the occurrence of certain events, including stock splits, reverse stock splits, combinations, subdivisions or reclassifications of common stock or preferred stock;

• the effect of any merger, consolidation, sale or other disposition of our business on the rights;

- the terms of any rights to redeem or call the rights;
- information with respect to book-entry procedures, if any;
- the terms of the securities issuable upon exercise of the rights;

•f applicable, the material terms of any standby underwriting, backstop or other purchase arrangement that we may enter into in connection with the rights offering;

• if applicable, a discussion of certain U.S. Federal income tax considerations; and

any other terms of the rights, including terms, procedures and limitations relating to the exchange and exercise of the rights.

Exercise of Rights

Each right will entitle the holder to purchase for cash or other consideration such shares of stock or principal amount of securities at the subscription price as shall in each case be set forth in, or be determinable as set forth in, the prospectus supplement relating to the rights offered thereby. Rights may be exercised as set forth in the prospectus supplement beginning on the date specified therein and continuing until the close of business on the expiration date set forth in the prospectus supplement relating to the rights offered thereby. After the close of business on the expiration date, unexercised rights will become void.

Upon receipt of payment and a subscription certificate properly completed and duly executed at the corporate trust office of the subscription agent or any other office indicated in the prospectus supplement, we will, as soon as practicable, forward the securities purchasable upon such exercise. If less than all of the rights represented by such subscription certificate are exercised, a new subscription certificate will be issued for the remaining rights. If we so indicate in the applicable prospectus supplement, holders of the rights may surrender securities as all or part of the exercise price for rights.

We may determine to offer any unsubscribed offered securities directly to stockholders, persons other than stockholders, to or through agents, underwriters or dealers or through a combination of such methods, including pursuant to standby underwriting, backstop or other arrangements, as set forth in the applicable prospectus supplement.

Prior to exercising their rights, holders of rights will not have any of the rights of holders of the securities purchasable upon subscription, including, in the case of rights to purchase common stock or preferred stock, the right to receive dividends, if any, or payments upon our liquidation, dissolution or winding up or to exercise any voting rights or, in the case of rights to purchase debt securities, the right to receive principal, premium, if any, or interest payments, on the debt securities purchasable upon exercise or to enforce covenants in the applicable indenture.

LEGAL OWNERSHIP OF SECURITIES

We can issue securities in registered form or in the form of one or more global securities. We describe global securities in greater detail below. We refer to those persons who have securities registered in their own names on the books that we or any applicable trustee or depositary or warrant agent maintain for this purpose as the "holders" of those securities. These persons are the legal holders of the securities. We refer to those persons who, indirectly through others, own beneficial interests in securities that are not registered in their own names, as "indirect holders" of those securities. As we discuss below, indirect holders are not legal holders, and investors in securities issued in book-entry

form or in street name will be indirect holders.

Book-Entry Holders

We may issue securities in book-entry form only, as we will specify in the applicable prospectus supplement. This means securities may be represented by one or more global securities registered in the name of a financial institution that holds them as depositary on behalf of other financial institutions that participate in the depositary's book-entry system. These participating institutions, which are referred to as participants, in turn, hold beneficial interests in the securities on behalf of themselves or their customers.

Only the person in whose name a security is registered is recognized as the holder of that security. Global securities will be registered in the name of the depositary. Consequently, for global securities, we will recognize only the depositary as the holder of the securities, and we will make all payments on the securities to the depositary. The depositary passes along the payments it receives to its participants, which in turn pass the payments along to their customers who are the beneficial owners. The depositary and its participants do so under agreements they have made with one another or with their customers; they are not obligated to do so under the terms of the securities.

As a result, investors in a global security will not own securities directly. Instead, they will own beneficial interests in a global security, through a bank, broker or other financial institution that participates in the depositary's book-entry system or holds an interest through a participant. As long as the securities are issued in global form, investors will be indirect holders, and not holders, of the securities.

Street Name Holders

We may terminate global securities or issue securities that are not issued in global form. In these cases, investors may choose to hold their securities in their own names or in "street name." Securities held by an investor in street name would be registered in the name of a bank, broker or other financial institution that the investor chooses, and the investor would hold only a beneficial interest in those securities through an account he or she maintains at that institution.

For securities held in street name, we or any applicable trustee or depositary will recognize only the intermediary banks, brokers and other financial institutions in whose names the securities are registered as the holders of those securities, and we or any such trustee or depositary will make all payments on those securities to them. These institutions pass along the payments they receive to their customers who are the beneficial owners, but only because they agree to do so in their customer agreements or because they are legally required to do so. Investors who hold securities in street name will be indirect holders, not holders, of those securities.

Legal Holders

Our obligations, as well as the obligations of any applicable trustee or third party employed by us or a trustee, run only to the legal holders of the securities. We do not have obligations to investors who hold beneficial interests in global securities, in street name or by any other indirect means. This will be the case whether an investor chooses to be an indirect holder of a security or has no choice because we are issuing the securities only in global form.

For example, once we make a payment or give a notice to the holder, we have no further responsibility for the payment or notice even if that holder is required, under agreements with its participants or customers or by law, to pass it along to the indirect holders but does not do so. Similarly, we may want to obtain the approval of the holders to amend an indenture, to relieve us of the consequences of a default or of our obligation to comply with a particular provision of an indenture, or for other purposes. In such an event, we would seek approval only from the holders, and not the indirect holders, of the securities. Whether and how the holders contact the indirect holders is up to the holders.

Special Considerations for Indirect Holders

If you hold securities through a bank, broker or other financial institution, either in book-entry form because the securities are represented by one or more global securities or in street name, you should check with your own institution to find out:

- how it handles securities payments and notices;
 - whether it imposes fees or charges;
- how it would handle a request for the holders' consent, if ever required;
- whether and how you can instruct it to send you securities registered in your own name so you can be a holder, if that is permitted in the future;

- •how it would exercise rights under the securities if there were a default or other event triggering the need for holders to act to protect their interests; and
 - if the securities are in book-entry form, how the depositary's rules and procedures will affect these matters.

Global Securities

A global security is a security that represents one or any other number of individual securities held by a depositary. Generally, all securities represented by the same global securities will have the same terms.

Each security issued in book-entry form will be represented by a global security that we issue to, deposit with and register in the name of a financial institution or its nominee that we select. The financial institution that we select for this purpose is called the depositary. Unless we specify otherwise in the applicable prospectus supplement, The Depository Trust Company, New York, New York, known as DTC, will be the depositary for all securities issued in book-entry form.

A global security may not be transferred to or registered in the name of anyone other than the depositary, its nominee or a successor depositary, unless special termination situations arise. We describe those situations below under "Special Situations When a Global Security Will Be Terminated." As a result of these arrangements, the depositary, or its nominee, will be the sole registered owner and holder of all securities represented by a global security, and investors will be permitted to own only beneficial interests in a global security. Beneficial interests must be held by means of an account with a broker, bank or other financial institution that in turn has an account with the depositary or with another institution that does. Thus, an investor whose security is represented by a global security will not be a holder of the security, but only an indirect holder of a beneficial interest in the global security.

If the prospectus supplement for a particular security indicates that the security will be issued as a global security, then the security will be represented by a global security at all times unless and until the global security is terminated. If termination occurs, we may issue the securities through another book-entry clearing system or decide that the securities may no longer be held through any book-entry clearing system.

Special Considerations For Global Securities

As an indirect holder, an investor's rights relating to a global security will be governed by the account rules of the investor's financial institution and of the depositary, as well as general laws relating to securities transfers. We do not recognize an indirect holder as a holder of securities and instead deal only with the depositary that holds the global security.

If securities are issued only as global securities, an investor should be aware of the following:

- an investor cannot cause the securities to be registered in his or her name, and cannot obtain non-global certificates for his or her interest in the securities, except in the special situations we describe below;
- an investor will be an indirect holder and must look to his or her own bank or broker for payments on the securities and protection of his or her legal rights relating to the securities, as we describe above;
- an investor may not be able to sell interests in the securities to some insurance companies and to other institutions that are required by law to own their securities in non-book-entry form;
- an investor may not be able to pledge his or her interest in the global security in circumstances where certificates representing the securities must be delivered to the lender or other beneficiary of the pledge in order for the pledge to be effective;
- the depositary's policies, which may change from time to time, will govern payments, transfers, exchanges and other matters relating to an investor's interest in the global security. We and any applicable trustee have no responsibility for any aspect of the depositary's actions or for its records of ownership interests in the global security. We and the trustee also do not supervise the depositary in any way;
- •the depositary may, and we understand that DTC will, require that those who purchase and sell interests in the global security within its book-entry system use immediately available funds, and your broker or bank may require you to do so as well; and
- financial institutions that participate in the depositary's book-entry system, and through which an investor holds its interest in the global security, may also have their own policies affecting payments, notices and other matters relating to the securities. There may be more than one financial intermediary in the chain of ownership for an investor. We do not monitor and are not responsible for the actions of any of those intermediaries.

Special Situations When A Global Security Will Be Terminated

In a few special situations described below, a global security will terminate and interests in it will be exchanged for physical certificates representing those interests. After that exchange, the choice of whether to hold securities directly or in street name will be up to the investor. Investors must consult their own banks or brokers to find out how to have their interests in securities transferred to their own names, so that they will be direct holders. We have described the rights of holders and street name investors above.

A global security will terminate when the following special situations occur:

- •if the depositary notifies us that it is unwilling, unable or no longer qualified to continue as depositary for that global security and we do not appoint another institution to act as depositary within 90 days;
 - if we notify any applicable trustee that we wish to terminate that global security; or
- if an event of default has occurred with regard to securities represented by that global security and has not been cured or waived.

The prospectus supplement may also list additional situations for terminating a global security that would apply only to the particular series of securities covered by the prospectus supplement. When a global security terminates, the depositary, and not we or any applicable trustee, is responsible for deciding the names of the institutions that will be the initial direct holders.

PLAN OF DISTRIBUTION

We may sell the securities to or through underwriters or dealers, through agents, or directly to one or more purchasers. A prospectus supplement or supplements will describe the terms of the offering of the securities, including, to the extent applicable:

- the name or names of any underwriters or agents;
- the purchase price of the securities and the proceeds we will receive from the sale;
- any over-allotment options under which underwriters may purchase additional securities from us;
- any agency fees or underwriting discounts and other items constituting agents' or underwriters' compensation;
 - any public offering price;
 - any discounts or concessions allowed or reallowed or paid to dealers; and
 - any securities exchange or market on which the securities may be listed.

We may distribute the securities from time to time in one or more transactions at:

- fixed price or prices, which may be changed from time to time;
 - market prices prevailing at the time of sale;
 - prices related to such prevailing market prices; or
 - negotiated prices.

Underwriters

If we use underwriters for a sale of securities, the underwriters will acquire the securities for their own account. The underwriters may resell the securities in one or more transactions, including negotiated transactions, at a fixed public offering price or at varying prices determined at the time of sale. The obligations of the underwriters to purchase the securities will be subject to the conditions set forth in the applicable underwriting agreement. We may offer the securities to the public through underwriting syndicates represented by managing underwriters or by underwriters without a syndicate. Subject to certain conditions, the underwriters will be obligated to purchase all the securities of the series offered if they purchase any of the securities of that series. We may change from time to time any public offering price and any discounts or concessions the underwriters allow or reallow or pay to dealers. We may use underwriters with whom we have a material relationship. We will describe the nature of any such relationship in any applicable prospectus supplement naming any such underwriter. Only underwriters we name in the prospectus supplement are underwriters of the securities offered by the prospectus supplement.

We may provide agents and underwriters with indemnification against civil liabilities related to offerings under this prospectus, including liabilities under the Securities Act, or contribution with respect to payments that the agents or underwriters may make with respect to these liabilities.

Only underwriters named in the prospectus supplement are underwriters of the securities offered by the prospectus supplement.

Agents

We may designate agents who agree to use their reasonable efforts to solicit purchases of our securities for the period of their appointment or to sell our securities on a continuing basis. We will name any agent involved in the offering and sale of securities and we will describe any commissions we will pay the agent in the applicable prospectus supplement. Unless the prospectus supplement states otherwise, our agent will act on a best-efforts basis for the period of its appointment.

We may authorize agents or underwriters to solicit offers by certain types of institutional investors to purchase securities from us at the public offering price set forth in the prospectus supplement pursuant to delayed delivery contracts providing for payment and delivery on a specified date in the future. We will describe the conditions to these contracts and the commissions we must pay for solicitation of these contracts in the prospectus supplement.

We may provide agents and underwriters with indemnification against civil liabilities related to this offering, including liabilities under the Securities Act, or contribution with respect to payments that the agents or underwriters may make with respect to these liabilities. Agents and underwriters may engage in transactions with, or perform services for, us in the ordinary course of business.

Direct Sales

We may also sell securities directly to one or more purchasers without using underwriters or agents.

Trading Markets and Listing of Securities

Unless otherwise specified in the applicable prospectus supplement, each class or series of securities will be a new issue with no established trading market, other than our common stock, which is currently listed on the NYSE Amex. We may elect to list any other class or series of securities on any exchange or market, but we are not obligated to do so. It is possible that one or more underwriters may make a market in a class or series of securities, but the underwriters will not be obligated to do so and may discontinue any market making at any time without notice. We cannot give any assurance as to the liquidity of the trading market for any of the securities.

Stabilization Activities

Any underwriter may engage in overallotment, stabilizing transactions, short covering transactions and penalty bids in accordance with Regulation M under the Exchange Act. Overallotment involves sales in excess of the offering size, which create a short position. Stabilizing transactions permit bids to purchase the underlying security so long as the stabilizing bids do not exceed a specified maximum. Short covering transactions involve purchases of the securities in the open market after the distribution is completed to cover short positions. Penalty bids permit the underwriters to reclaim a selling concession from a dealer when the securities originally sold by the dealer are purchased in a covering transaction to cover short positions. Those activities may cause the price of the securities to be higher than it would otherwise be. If commenced, the underwriters may discontinue any of these activities at any time.

Any underwriters who are qualified market makers on the NYSE Amex may engage in passive market making transactions in the securities on the NYSE Amex in accordance with Rule 103 of Regulation M, during the business day prior to the pricing of the offering, before the commencement of offers or sales of the securities. Passive market makers must comply with applicable volume and price limitations and must be identified as passive market makers. In general, a passive market maker must display its bid at a price not in excess of the highest independent bid for such security. If all independent bids are lowered below the passive market maker's bid, however, the passive market maker's bid must then be lowered when certain purchase limits are exceeded.

LEGAL MATTERS

The validity of the securities being offered by this prospectus will be passed upon for us by Aboudi & Brounstein Law Offices. If the validity of any securities is also passed upon by counsel any underwriters, dealers or agents, that counsel will be named in the prospectus supplement relating to that specific offering.

EXPERTS

Our audited financial statements for the period from April 6, 2000 (inception) to December 31, 2004, have been audited by Lane Gorman Trubitt, L.L.P., independent registered public accounting firm, as set forth in their report thereon included in our Annual Report on Form 10-K for the years ended December 31, 2009 and 2008. Such financial statements have been incorporated in this prospectus by reference to our Annual Report on Form 10-K for the years ended December 31, 2009 and 2008, in reliance on the authority of said firm as experts in auditing and accounting.

The financial statements of Zion Oil & Gas, Inc. (a development stage enterprise) as of December 31, 2009, 2008 and 2007, and for each of the years in the three-year period ended December 31, 2009, and for the period from April 6, 2000 (inception) to December 31, 2009 and management's assessment of the effectiveness of internal control over financial reporting as of December 31, 2009 have been incorporated by reference herein in reliance upon the reports of Somekh Chaikin, a member of KPMG International and an independent registered public accounting firm and, with respect to the financial statements, Lane Gorman Trubitt, L.L.P., independent registered public accounting firm, incorporated herein by reference, and upon the authority of said firms as experts in accounting and auditing. Such report contains an explanatory paragraph that states that Zion is in the development stage and has no operating revenue, limited capital resources and a loss from operations, all of which raise substantial doubt about Zion's ability to continue as a going concern. The financial statements do not include any adjustments that might result from the outcome of this uncertainty.

WHERE YOU CAN FIND MORE INFORMATION

We are subject to the reporting requirements of the Exchange Act and file annual, quarterly and current reports, proxy statements and other information with the SEC. You may read and copy these reports, proxy statements and other information at the SEC's Public Reference Room at 100 F Street, N.E., Washington, DC 20549. You can request copies of these documents by writing to the SEC and paying a fee for the copying cost. Please call the SEC at 1-800-SEC-0330 for further information on the Public Reference Room. The SEC also maintains an Internet site that contains reports, proxy statements and other information about issuers, like us, who file electronically with the SEC. The address of the SEC's web site is http://www.sec.gov .. Our common stock is listed for trading on the NYSE Amex under the symbol "ZN."

We have filed a registration statement on Form S-3 with the SEC to register the securities that may be offered pursuant to this prospectus. This prospectus is part of that registration statement and, as permitted by the SEC's rules, does not contain all of the information included in the registration statement. For further information about us, this offering and our common stock, you may refer to the registration statement and its exhibits and schedules as well as the documents described herein or incorporated herein by reference. You can review and copy these documents, without charge, at the public reference facilities maintained by the SEC or on the SEC's website as described above, or you may obtain a copy from the SEC upon payment of the fees prescribed by the SEC.

INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

The SEC allows us to "incorporate by reference" the information we file with them, which means that we can disclose important information to you by referring you to those documents. The information we incorporate by reference is considered to be an important part of this prospectus, and information that we file with the SEC at a later date will automatically add to, update or supersede this information.

We incorporate by reference into this prospectus the documents listed below:

- our annual report on Form 10-K for the year ended December 31, 2009 filed with the SEC on March 16, 2010;
- our annual report on Form 10-K for the year ended December 31, 2008 and filed with the SEC on March 31, 2009.
 - our definitive proxy statement filed with the SEC on April 21, 2009;
 - our Current Report on Form 8-K filed with the SEC on March 19, 2010;
- the description of our common stock in our registration statement on Form 8-A filed with the SEC on December 29, 2006, including any amendments or reports filed for the purpose of updating such description; and
- all future filings that we make with the SEC under Section 13(a), 13(c), 14, or 15(d) of the Exchange Act after the date of filing of the registration statement on Form S-3 of which this prospectus is a part and prior to the termination or completion of any offering of securities under this prospectus and all applicable prospectus supplements (except, in each case, for information contained in any such filing that is furnished and not "filed" under the Exchange Act), which filings will be deemed to be incorporated by reference in this prospectus, as supplemented by the applicable prospectus supplement, and to be a part hereof from the respective dates of such filings.

We will provide without charge to each person, including any beneficial owner, to whom this prospectus is delivered, upon written or oral request of such person, a copy of any or all of the information that is incorporated by reference in this prospectus. Requests for such documents should be directed to: Shareholder Relations, Zion Oil & Gas, Inc., 6510 Abrams Rd., Suite 300, Dallas, TX 75231.

This prospectus is part of a registration statement on Form S-3 that we filed with the SEC. That registration statement contains more information than this prospectus regarding us and our common stock, including certain exhibits and schedules. You can obtain a copy of the registration statement from the SEC at the address listed above or from the SEC's Internet website.

You should rely only on the information provided in and incorporated by reference into this prospectus or any prospectus supplement. We have not authorized anyone else to provide you with different information. You should not assume that the information in this prospectus or any prospectus supplement is accurate as of any date other than the date on the front cover of these documents.