

ZION OIL & GAS INC  
Form FWP  
March 19, 2010

Filed pursuant to Rule 433  
Registration Statement No. 333-164563

Zion Oil & Gas Newsletter

March 19, 2010

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Dear Shareholder and/or Friend of Zion...

My last update to you was on March 5, 2010. During the past two weeks, we have continued our completion work on the Ma'anit-Rehoboth #2 well. As you can read below, this includes setting packers in the wellbore and perforating the formation by lowering explosives into the well:

On March 16, 2010, Zion's financials for the 2009 calendar year were filed with the SEC. If you want to review them, they are available on our website; please click [here](#).

During the past two weeks, a team from Zion attended the National Religious Broadcasters (NRB) Conference in Nashville, Tennessee. The NRB is a non-partisan, international association of Christian communicators whose member organizations represent millions of listeners, viewers and readers. Those attending showed much interest in Zion Oil & Gas and Zion's Founder and Chairman, John Brown, gave a number of media interviews at the Conference.

Also visiting the NRB conference was Tom Boulting of Charter Films Ltd. Tom is planning to film a documentary about John Brown and Zion Oil & Gas, Inc. with the title '49:1 The Zion Story' He has already established a website for the project at [www.zionthemovie.com](http://www.zionthemovie.com), including a trailer that you may be interested to watch.

Last week, the Jerusalem Post reported that the Founder and former Chairman of Markstone Capital Group, one of the largest private equity firms investing in Israel, visited Israel and attended the Economic Energy Conference in Tel Aviv. The report notes that, at the conference, he expressed much interest in the Israeli energy sector, which he believes will become significant for the economy and has the potential to lead Israel toward energy independence.

It is clear the Israeli energy sector continues to attract a very high level of interest.

Here is this week's operations update:

The Ma'anit-Rehoboth #2 Wellsite on Thursday, March 18, 2010

### The Ma'anit-Rehoboth #2 Well

Since the previous report, we have been working towards the first production test of this well. We have “conditioned” the hole with clean, filtered fluid (a potassium chloride solution that is compatible with the reservoir rock), successfully perforated the first test interval of approximately 20 meters (see the sample illustrations above), acidized the interval, rigged up Schlumberger Oilfield Services Company, and ran in the hole with their production testing tools. By the time this report is published, the first production test should be underway.

During the acidizing operations, we used a 15% hydrochloric acid solution designed to dissolve any rock debris that may have collected in the newly formed perforation channels and to help clean out the near wellbore rock from any residual drilling mud.

The acid solution contains various additives that serve different roles as part of the overall acid “recipe”: a de-emulsifier that ensures fluid stability; a surfactant (wetting agent) that improves fluid flow by reducing friction; a corrosion inhibitor that protects the pipe from the corrosive effects of the acid; and a solvent which helps to clear any plugging caused by hydrocarbons in the rock pore throats.

Surface pressures observed during the acidizing operation suggest that the job successfully achieved its objectives and that we are now ready to production test the flow potential of the first interval.

To begin the production test, we first create a pressure differential in the wellbore. We do this by estimating the pressure in the rock formation of the test interval and then reduce the hydrostatic pressure in the production pipe (run in the wellbore to near the test interval) to a much lower pressure.

This is done by evacuating the fluid column in the production pipe using nitrogen gas – which is possible since the production pipe can be physically isolated from the wellbore. When we are ready to begin the test, we open the production pipe to the test interval and the large pressure imbalance creates the energy for any fluids and gases in the rock to flow to the wellbore and, ideally, to the surface.

We have measuring devices in the well and at the surface, in order to obtain a very accurate reading on pressures and flow rates that will ultimately be used to estimate the amount of producible hydrocarbons within the reservoir rock, if any.

Following this initial test, we will move down hole, where we will test an interval in what is now the ‘open hole’ section of the well. The timing for this next test will depend largely on the outcome of the first test.

Many different factors have to be taken into account when determining how long to production test an interval in an exploration well. A test can run from a few hours to several days and shorter tests don’t necessarily mean bad news just as longer tests don’t necessarily mean good news. We have done what is required to ensure a ‘good’ test... now it is up to the well!

So, at this critical point in our exploration effort, as the Aladdin Middle East, Baker Hughes and Schlumberger specialist teams move forward with their work, let's all pray for them to reach success... (Deuteronomy 4:7).

#### Operations at the Elijah #3 Well

(No change from previous report.)

The Elijah #3 well was drilled to a depth of approximately 10,938 feet (3,334 meters) when the drill string became stuck within the Asher Volcanics section of the hole. After recovering a significant portion of the stuck drill pipe, progress in recovering the remainder of the pipe slowed and the decision was made to temporarily suspend drilling operations pending further analysis of the situation and to relocate the rig to the Ma'anit-Rehoboth #2 well.

We are currently assessing various options that should enable us to proceed with the 'next steps' for this well.

#### The Issachar-Zebulun Permit Area

As reported previously, Zion and the Geophysical Institute of Israel (GII) have signed an Agreement for GII, on behalf of Zion, to acquire approximately 30 kilometers of seismic data in Zion's Issachar-Zebulun Permit area.

The timing for the field work is scheduled to take place mid-summer 2010.

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"In your good pleasure, make Zion prosper..."

Psalm 51:18

Thank you for your support of Zion, and

Shalom from Israel

Richard Rinberg

CEO of Zion Oil & Gas, Inc.

[www.zionoil.com](http://www.zionoil.com)

**FORWARD LOOKING STATEMENTS:** Statements in this communication that are not historical fact, including statements regarding Zion's planned operations, geophysical and geological data and interpretation, anticipated attributes of geological strata being drilled, drilling efforts and locations, the presence or recoverability of hydrocarbons, timing and potential results thereof and plans contingent thereon and sufficiency of cash reserves are forward-looking statements as defined in the "Safe Harbor" provisions of the Private Securities Litigation Reform Act of 1995. These forward looking statements are based on assumptions that are subject to significant known and unknown risks, uncertainties and other unpredictable factors, many of which are described in Zion's periodic reports filed with the SEC and are beyond Zion's control. These risks could cause Zion's actual performance to differ materially from the results predicted by these forward-looking statements. Zion can give no assurance that the expectations reflected in these statements will prove to be correct and assumes no responsibility to update these statements.

Contact Information

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