

COO REPORT TO THE ZION OIL & GAS 2011 ANNUAL MEETING

[OPENING SLIDE]

Good afternoon Ladies and Gentlemen.

I am pleased to be with Zion's shareholders and friends again this year to present you with an Operations Report that outlines the company's significant Exploration and Development activities during the past 12 months.

In one year's time, I think we can all agree that much can change. Within the oil and gas industry *in the past year*, we have seen the industry generally recover from the worst catastrophe ever to befall it – I'm speaking of course about the offshore drill ship explosion that occurred in April 2010 in the Gulf of Mexico.

In the past year, we have seen oil prices rise from about \$75 per barrel to more than \$125 per barrel – an increase of almost 70%. This rise was caused by the unprecedented events of civil unrest that played out and continues to play out in oil & gas provinces in North Africa and the Middle East.

In the past year, gasoline prices have spiked to over \$5 per gallon in some places here in the US and much higher elsewhere in the world.

In the past year, interest in what was only very recently an under-developed oil & gas industry in Israel has sharply risen due to major gas discoveries in the eastern Mediterranean Sea off of Israel's coastline.

A recent report by the International Energy Agency notes that global demand for oil will continue to outpace global supply for the foreseeable future. Industrialization across the globe continues to drive the need for energy.

It seems that never has the need been greater for discovering new energy supplies.

Ladies and gentlemen, I'm pleased to report to you today that in the past year, we have taken steps to well position Zion Oil & Gas relative to both the insatiable demand for new energy sources and perhaps more significantly to Israel's rapidly emerging presence within the global energy market.

Now, let me turn to the Operations Report and provide you with some specifics for the past year.

[SLIDE 2 – SINCE WE MET...]

Since we met last year, a number of significant milestones were achieved by Zion. I will review each of these achievements in some detail but please note that our work efforts reflect both a focus on the near-term (drilling the Ma'anit-Joseph #3 well) and the long-term (as indicated by our success and intent in expanding our exploratory resource base).

[SLIDE 3 – SIGNIFICANT INCREASE...]

During the past 12 months, we have increased our *potential* exclusive exploratory acreage position by about 60% to around 530,000 acres. This increase assumes that Zion will be granted all the permits and licenses already submitted to Israel’s Petroleum Commissioner’s Office but not yet decided upon. While there is no guarantee that we will receive any or all of the new areas requested, based on our track record of being a responsible operator, we are optimistic that the Commissioner’s Office will look favorably upon our applications.

[SLIDE 4 – ZION’S POTENTIAL...]

Now, just how large is 530,000 acres? To put it into perspective so our local audience here in Dallas can relate...

- Almost 2.5 times the size of the city of Dallas
- More than 3,800 times the size of the Cowboy Stadium complex
- More than 400,000 football fields (including end zones)
- While everything is bigger in Texas...it would still take almost 2 million Cowboy Stadium scoreboards to fill out 530,000 acres!

[SLIDE 5 – CURRENT DEVELOPMENT ACTIVITY]

Let me now update you on our current development activity.

[SLIDE 6 – MA’ANIT-JOSEPH #3]

Any discussion of Zion’s activity in the past year must begin with the Ma’anit-Joseph #3 well. This well targets the large Ma’anit geologic structure identified by our geologists in the Joseph License Area. Previously we drilled the Ma’anit-Rehoboth #2 well into this geologic structure but to a shallower depth, reaching younger rocks of Triassic age. While physically near to the Ma’anit-Rehoboth #2 well, the Ma’anit-Joseph #3 (or MJ-3) well was designed to drill deeper into rocks of Permian age.

The MJ-3 well was spud in late August of last year and reached a vertical drill depth of more than 19,300 feet on June 13. The MJ-3 well is the deepest ever drilled by Zion and one of the deepest ever drilled in Israel. It is the only well to penetrate what we believe to be Permian-aged rocks in Northern Israel.

[SLIDE 7 – HOW LONG IS...]

By any measure, the MJ-3 well is a very deep well. It may be hard to imagine what 19,000 feet looks like so if you were to take these (11) structures – the very tallest ever built around the world – stacked them end to end, you would still come up short by about 2,000 feet compared to the drilled length of the MJ-3 well.

[SLIDE 8 – MJ-3 PHILOSOPHY...]

When we started to plan for drilling the MJ-3 well, we knew that it would be a very expensive well. Our objective in drilling the well, however, was not to drill a “cheap” well but to drill a “quality” well. So when we set out to acquire goods and services for the well we adopted the philosophy of obtaining

those goods and services that provided the ‘Best Overall Value’ for Zion, where “Value” is defined by a combination of cost, quality, and reliability.

To ensure that we were indeed getting the Best Overall Value for Zion, we needed to cast a wide net when identifying potential suppliers for our project. As you can see by this slide and the one that follows, we did cast a very wide net when identifying and ultimately selecting our various suppliers of goods and services.

[SLIDE 9 – MULTINATIONAL PROJECT]

In casting a wide net to identify our suppliers for the MJ-3 well, we reached into 11 different countries spanning 4 different continents to ensure that Zion was truly getting the “Best Overall Value”! I would also note that one source of products coming from the United States was from right here in Texas.

[SLIDE 10 – CONTINUOUS IMPROVEMENT]

Another philosophy we followed while planning and then executing the MJ-3 project was one of “Continuous Improvement”. From the initial well planning through today, we are continually striving to find ways to improve our effectiveness and efficiency in completing the objectives for the MJ-3 project. Listed on this slide are but a few of the improved practices that we implemented for this well – certainly not least of which is a more robust site specific safety and security plan.

[SLIDE 11 – CHALLENGES]

The famous Scottish poet, Robert Burns, wrote a poem in 1786 titled *To A Mouse* which contained a line, translated to modern English, that reads: “The best laid plans of mice and men often go awry.” The meaning of this statement, true today as it was more than 200 years ago, is that even the most carefully prepared plans may and often do go wrong.

Throughout the MJ-3 project, this axiom certainly became realized on a number of occasions despite the level of planning and preparation done before the well was even spud.

Sometimes the issues were localized, like our need to take extensive drill rig sound mitigation measures including the construction of a large acoustic wall. Sometimes the issues were regional, like our need to contend with supply chain disruptions due to unprecedented levels of political upheaval in N. Africa and the Middle East. Finally, sometimes the issues were global, like our need to compete effectively with much larger oil & gas operators for a shrinking supply of goods and services brought upon by higher levels of industry activity with rising crude oil prices.

Despite these various challenges working against our ‘best laid plans’, I am reminded of these words from a famous song “We Shall Overcome” and overcome we did by adapting to the circumstances and conquering these challenges. Ultimately, we drilled one of the deepest wells ever in Israel, and achieved our objective of reaching the target drill depth.

[SLIDE 12 – FUTURE DEVELOPMENT OPPORTUNITIES]

Now let me update you on some potential future development opportunities we are considering.

[SLIDE 13 – BUILDING DEVELOPMENT PORTFOLIO]

At Zion, we are committed to building our development portfolio of potential drilling opportunities. To this end, we generally first start with collecting data to improve our understanding of the geology in an area that interests us.

Last summer, and using the resources of the Geophysical Institute of Israel, we acquired approximately 30 miles of new, 2-dimensional seismic data across our Asher-Menashe License Area and former Issachar-Zebulun Permit Area.

This raw data is then processed into useful information for our geologists to create new or update existing geologic maps of the region. This new or updated geologic model then forms the basis for determining if there are any potential drilling opportunities in the area.

[SLIDE 14 – SEISMIC SURVEY RESULTS]

From the seismic survey taken in the Asher-Menashe License Area, we learned that the extent of the Asher Volcanics was deeper and thicker than originally expected. The Asher Volcanics you may recall is the geologic layer in which the drill bit became stuck while drilling the Elijah-3 well early last year.

Now that we have a better understanding of the geologic model in this region, we will evaluate the technical potential and economic viability of either redrilling the Elijah-3 well or drilling a new well into the target geologic structure. This work will be carried out later this year; in the meantime, the Elijah-3 well remains temporarily suspended.

The seismic data that we collected in the former Issachar-Zebulun Permit Area was focused on the Jordan Valley region in the eastern portion of the Permit. The results of this work were encouraging to our geologists for the potential of drilling prospects so we proceeded with seeking a Petroleum License from Israel's Petroleum Commissioner. A Petroleum License typically carries a commitment to drill at least one well in the License Area during the initial term of the License (normally 3 years). I'm pleased to report that in April of this year, we were notified by the Petroleum Commissioner's Office that we were awarded the new License which we called the Jordan Valley License.

Additionally, we have requested a new Permit (which we call the "Zebulun" Permit) in much of the remaining portion of the former Issachar-Zebulun Permit Area. A Permit area allows for exploratory data collection but not for the drilling of any new wells. We filed for this Permit Area in February and are awaiting a decision from the Petroleum Commissioner.

[SLIDE 15 – PROPOSED ASHER-JOSEPH...]

One additional Permit area that we requested just this month is called the Asher-Joseph Permit Area. As you can see from the map, this Permit Area – if granted – will build on our dominant exclusive exploratory acreage position in Northern Israel. Our geologists have already identified a few areas of interest in the proposed Permit Area and will be seeking to acquire new and reprocessed seismic data to assess the drilling potential in this region.

As with the Zebulun Permit, a decision to grant this permit to Zion is pending a decision from the Petroleum Commissioner.

[SLIDE 16 – PROPOSED DEAD SEA...]

Finally, we also applied for a new License in the Dead Sea Area of Israel as shown here on the map. This is a new region for Zion and, if granted, would expand our exploration footprint into an area of known oil production at depths that are shallower than what we have drilled in Northern Israel.

As we have applied for a License in this area, if granted to us, we will likely be expected to drill at least one well within the initial License term which, again, is expected to be 3 years.

We filed our application for this new License Area with the Petroleum Commissioner's Office in February 2011. I should note that a new Petroleum Commissioner assumed office just this month and we understand that there may soon be some changes forthcoming from the Israeli government regarding the granting of new Licenses and Permits.

So while we are excited about the potential for exploration and drilling into the Dead Sea License Area and exploration activities in both the Zebulun and Asher-Joseph Permit Areas, we don't know at this time 'when' or 'if' these new areas will be granted.

[SLIDE 17 – BEHIND THE SCENES...]

Before closing, I would like to share with you a "Behind the Scenes Look" at all of the advance work that was carried out before the actual drilling of the Ma'anit-Joseph #3 well.

[SLIDE 18 – IN THE BEGINNING]

Wellsite construction work began on July 4 last year in what used to be an onion field. We used a well-known local construction company that has built many large infrastructure projects throughout Israel.

[SLIDE 19 – AN ONION FIELD NO MORE]

Here you can see some of the early earth work clearing off the topsoil. Note the light color powdery appearance of the soil – apparently ideal for growing premium onions!

[SLIDE 20 – A NEW FOUNDATION]

Once the topsoil is removed, several new layers of foundation mix are applied. We took soil core samples and used a soil engineer to help determine the type of composition that would be needed for the hard base that was necessary to support the drilling rig and ancillary equipment on the wellsite.

[SLIDE 21 – LEVELING THE PLAYING FIELD]

The wellsite must be built to be near perfectly flat to properly support a very tall drilling rig mast. Here you can see site surveyors are ensuring the exacting standards of the drill site are being met.

[SLIDE 22 – FIRST PIPE IN THE HOLE]

With the site now built, the task of starting to drill the well begins. The first step in drilling a well starts with running a section of a large diameter conductor pipe into a shallow hole drilled by a local contractor (not the drilling rig). This conductor pipe essentially serves as a guide for the drill bit when actual drilling begins.

[SLIDE 23 – THUMBS UP]

Here the conductor pipe is installed and the crewman is giving a “thumbs up” to the crane operator. Note the size of the pipe compared to the crewman.

[SLIDE 24 – PREPARING THE PAD]

The next step in the process is to prepare the huge concrete pad that the drilling rig will rest upon. Note the relative size of the pad compared to the trucks in the background and the crewman in the foreground.

[SLIDE 25 – CONCRETE JUNGLE]

This is what the pad looks like once the concrete is poured.

[SLIDE 26 – DIGGING THE MUD PIT]

A large pit is dug next to the drilling pad. This pit is used to store drilling mud while the well is being drilled. The large size of the pit is an indication of how much mud is required and therefore how deep the well will be drilled.

[SLIDE 27 – MUD PIT LINING]

The mud pit is lined to protect surface ground waters and the environment from mud seepage.

[SLIDE 28 – MOBILIZING THE DRILL RIG]

Now it's time to mobilize and set up the drilling rig. Due to the large size of the drilling rig, it must be assembled from many smaller parts.

[SLIDE 29 – MASSIVE SUBSTRUCTURE]

Here you can get a sense of the massive substructure needed to support the 144 foot high drilling mast.

[SLIDE 30 – STARTING TO TAKE SHAPE]

Here is another view of the substructure being built. Note how the structure is being built around the conductor pipe in the middle of the photo.

[SLIDE 31 – SUPER SIZED EQUIPMENT]

To operate a 2,000 Horsepower drilling rig with over 700,000 pounds of hook load capacity, you need some large equipment. This rig runs on (3) turbo charged diesel engines and (2) skid-mounted 700 kVA generators.

[SLIDE 32 – THE GREAT WALL...]

Earlier, I referenced certain sound mitigation measures that were needed during the drilling of the MJ-3 well. Here is one such measure...the construction of a large Acoustic Wall to absorb and deflect rig sounds away from the surrounding communities. We employed the services of an acoustics engineer to help design this wall to comply with local sound ordinances.

[SLIDE 33 – PREPARE TO RAISE THE MAST]

Here is a nice profile shot of the drill site – Note how the wellsite needed to be built up on one side to make it level.

[SLIDE 34 – TAKING ON SUPPLIES]

With the drilling rig now fully constructed, we began to take on equipment from various points around the globe. Here you see blow-out prevention equipment from Egypt; casing from China; mud chemicals from Turkey; and cement equipment from Italy.

[SLIDE 35 – FINAL TOUCHES]

Here a crew is finishing some work around the offices and living quarters within the wellsite and generally putting the final touches on everything before drilling begins.

[SLIDE 36 – SAFETY FIRST]

Yours truly is conducting an “all hands” pre-spud safety meeting just before we spud the well.

[SLIDE 37 – DRILL AHEAD]

On August 26, we began turning to the right and the drill bit began its intrepid journey to the Permian.

William L. Ottaviani

Zion Oil & Gas, Inc.

President & COO

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