2022
Annual Shareholders Meeting
June 08, 2022

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Chief Executive Comments

Presented by:

Robert Dunn

CEO

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Accounting and Finance Update

Presented by:

Mike Croswell

CFO

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Accounting and Finance Update

- Cash On Hand/Treasury Management (Date from 10-Q filed on May 10, 2022)
  - $8.2 million cash on hand
  - Cash on hand plus forecast receipts and disbursements expected to be sufficient through January 2023
  - $9.4 million raised through the Direct Stock Purchase Plan (“DSPP”)
  - 13.2 million warrants outstanding at various exercise prices, which could result in significant cash to Zion upon exercise
  - RBSM LLP as external auditors since October 2018
    - On-time filings each quarter
    - No audit adjustments or SOX deficiencies

G&G Update

Presented by:

Lee Russell

Vice President of Geology

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Questions Answered Since MJ-1

MJ-1 drilling revealed a large amount of missing Cretaceous age stratigraphic section, including a potential source rock interval.

It was debated as to whether this missing section was due to a fault or an erosional event producing an unconformity surface.

2D seismic data suggested that an erosional unconformity was the likely explanation but was far from definitive.

3D data acquired since the drilling of MJ-1 has confirmed the presence of a major erosional unconformity.

This unconformity has removed the Upper Cretaceous organic rich source shale over much of our license area.

The light oil encountered while drilling MJ-1 must then have come a much deeper source. Probably Silurian shales.

Questions Answered Since MJ-1

There were significant surprises stratigraphically during the drilling of MJ-1.

The structural resolution of the 2D seismic data used to define the MJ-1 structure was insufficient to predict what we actually encountered during drilling.

Our new 3D survey covers 72 Sq. Km around the well and has given us a comprehensive and accurate structural picture of the subsurface.

This 3D allowed us to define the structure we have drilled with the

MJ-2 well.

Other structures have now been mapped in the area giving Zion an inventory of undrilled prospects / leads to pursue if MJ-2 is ultimately a success.

Operational Update

Presented by:

Monty Kness

Vice President of Operations

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Overview

- Zion Oil and Gas completed the deepest well ever drilled in Israel
  - Exploratory Well
    - Exploratory region
    - Unexpected Lithology and Challenges are common when exploring in these types of regions
  - Difficult environment
    - Extreme Temperatures at depth
    - Extreme Pressures at depth
    - Highly complex and non-congruent geology
  - Newest and Most Advanced Equipment Technology Used
    - High speed and high temperature mud motors
    - High Temperature directional tools
    - Drill while Casing
- Completed the well safely and accordance with Israeli petroleum laws while protecting the environment
  - Water Based Mud
  - Periodic Inspections and safety tests
  - Great relationships with the surrounding community
    - Observance of Religious guidelines (Shabbat and Religious Holidays)

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Operational Highlights

Date	Completed Task	Comments
22-Nov-2021	Drilling Completed	MD 5,500+m or 18,000+ft
14-Dec-2021	Feasibility Study Completed	Further understanding of permeability. porosity, and general subsurface lithology and well characteristics
15-Jan-2022	Feasibility Study Analyzed	Analysis identified 4 potential production zones
15-Mar-2022	All Completion and testing equipment contractually secured	Casing and Tubulars arrived 7 months after order
06-May-2022	Final Casing Cemented	MJ-02 drilling operations officially completed

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Operational Schedule

- Q3 Operational Plan
  - Completions
  - Testing
- Additional operational plans are currently being developed for submission to the appropriate governing bodies

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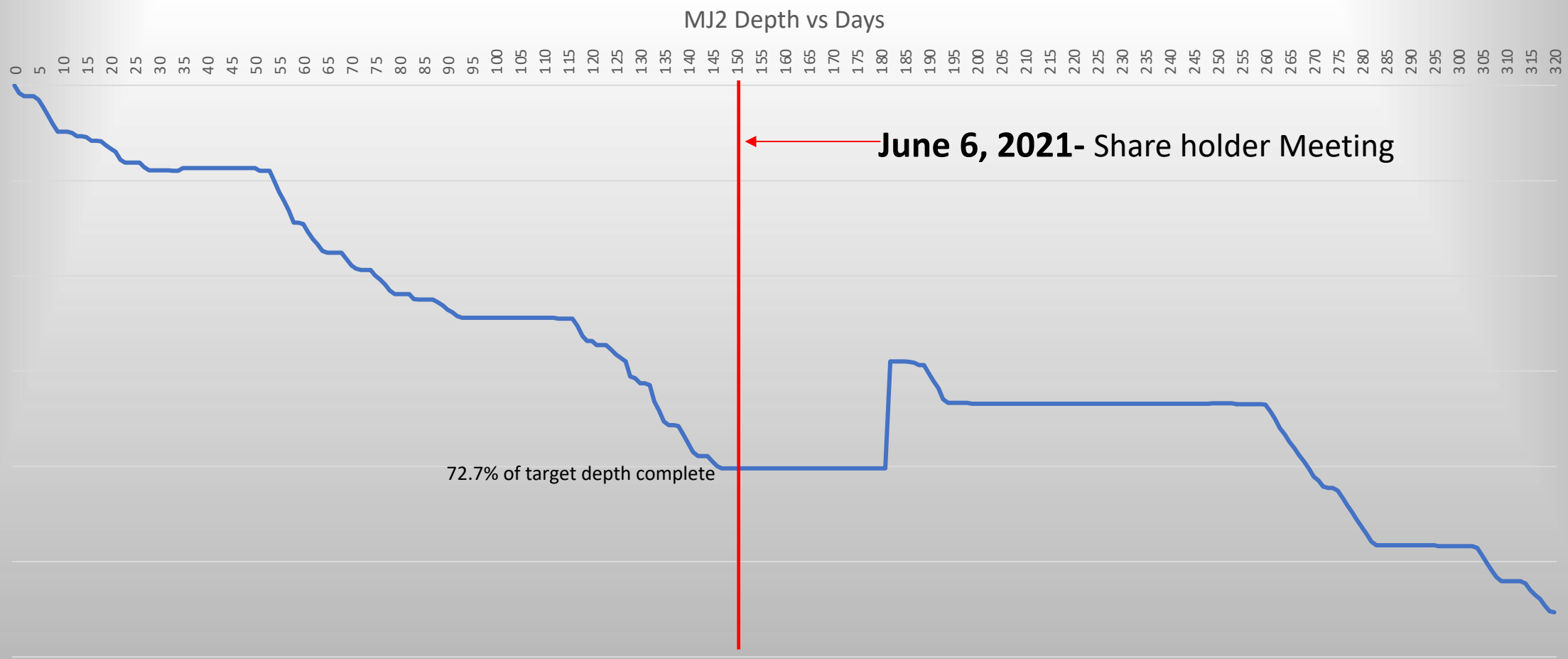
MJ-02 from 2021 to Now



June 6, 2021 Operations: Ream and wash to ready the wellbore for wireline

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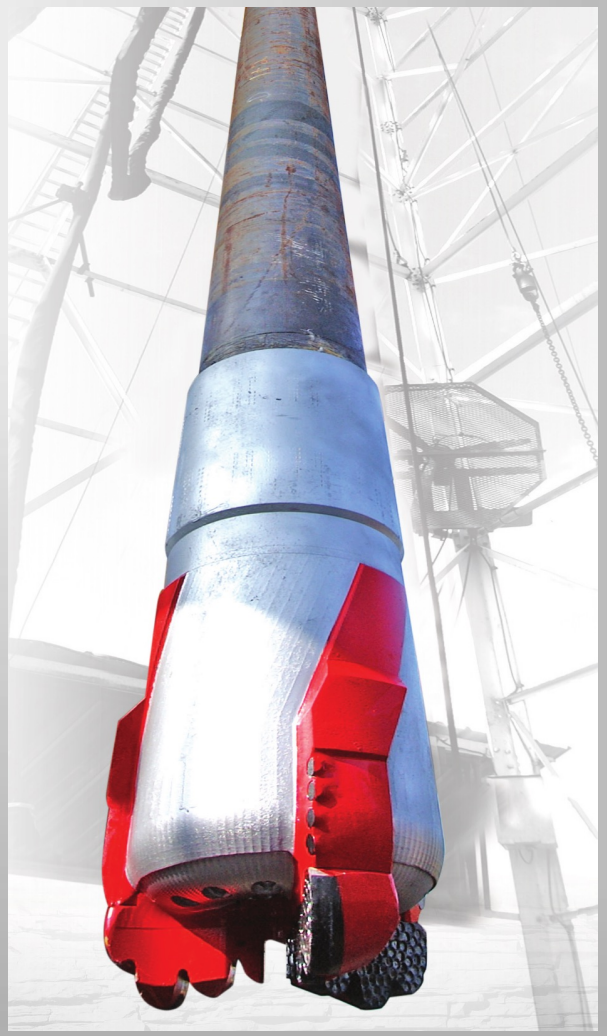
What Happened?

- Simply put, the shales that the crew was drilling through started to move and fall into the wellbore, preventing the drill pipe from rotating
  - Pack off/Shale Bridging
- Shale movement was not observed during drilling through the Rosh Pina area
- Shales started collapsing after Pulling Out of Hole
  - Shales became highly mobile and active

The Solution

- Drill While Casing (DwC)
  - First time ever used in Israel
- DwC is a technology that uses casing as the drill pipe and a drillable drill bit
- Once the drill bit has been exhausted the casing is set and cemented
- The crew was able to reach the shale bridge before the drill bit exceeded its maximum compression strength capabilities
  - Deep enough to mitigate the collapsing shales and allow the crew to move forward
  - Altered how the well would be completed to TD
- The crew continued to try and solve the problem while waiting on DwC equipment
  - Consulted leading mud experts in Texas, Bolivia and the UK familiar with active shale zones to design a Water Based shale mud
  - Attempted a squeeze cementing operation to cement the shales



Timing Interruptions to Completion

Logistical Delays

- Up until this “change in plans” Zion had successfully navigated the Covid shutdowns and had all material and equipment in country to complete the well
- The shale collapse/challenges resulted in new engineering using DwC as well as the well schematic to TD
- New equipment and material had to be procured, manufactured, and imported
  - Global supply and manufacturing interruptions along with inventory depletion drastically slowed down all three of these critical supply chain areas

Equipment Failure

- After completing the first DwC run, a torque ring broke and sheered off the casing below
- A second DwC run was completed after acquiring a second DwC bit

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Front of the line

- Price of Oil on June 18, 2021, was $71.29
  - The generally accepted equilibrium price for producing and consuming oil-based products is $70.00
- When oil began climbing over $70.00 a surge in global rig start ups began
- Zion was fortunate to have requested inventory prior to the surge
  - Mud Motors
  - Directional Tools
  - Drilling Accessories
  - Mud Chemicals
- Currently, inventories around the world for oil and gas supplies are depleted and manufacturing times are as long as 18 months for commonly used items like sand shaker screens

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Completion of Drilling

- Once the crew successfully navigated past the shale zone, drilling and operation went smoothly until reaching our target depth on November 22, 2021
- Deepest land based well drilled in Israel
- The crew stayed directly on course and hit all predetermined target zones
- Completed the well with a 6” borehole, significantly larger than MJ-01

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Health and Safety

- Man Hours: 234,324
- Incident Rate: 0.85
  - Industry Standard: 2.0
- 23,240 training hours
  - Trained an Israeli Rig Crew
- Thousands of safety meetings, inspections, observation cards, Job Safety Analysis, and special work permits were completed
  - Highly indicative of a comprehensive crew effort and commitment towards safety

Man Hours	234,324
Total KM Driven	0
Days no TRI	593
Days no LTI	593
UA/UC/NM	1,049
First Aid Cases	11
Medical Treatment Cases	0
Restricted Work Case	1
Lost Time Accident	0
Fatalities	0
Vehicle Incidents	1
Environmental Incidents	2
JSA	4,926
Cold Work Permit	2,544
Hot Work Permit	208
Man Rider Permit	6
Live Circut Permit	274
Confined Space Permit	2
Radioactive Permit	4
Diesel Transfer Permit	69
Gas Tests Performed	1
LOTO Performed	268
Pre Job Meeting	1,062
Pre Tour Meetings	4
Weekly HSE Meetings	0
Monthly HSE Meetings	1
Safety Committee Meetings	0
Supervisors Meeting	3
Managers Meeting	3
PCAR Open	28
PCAR Closed	15
Forklift Inspections	678
Crane Inspections	182
Vehicle Inspections	4
Camp Hygiene Inspections	56
First Aid Inspection	56
PPE Inspection	62
Mast Inspections	54
Drillers Inspection	65
Harness Inspection	38
SCBA Inspection	17
Fire Extinguisher Inspection	15
Spill Kit Inspection	13
Fire Cabinet Inspection	5
Fall Arrestors Inspection	152

Smoke Detector Inspection	12
Rig Inspection	9
HSE Rep Inspection	2
Supervisor Inspection	1
Manager Inspection	1
Corporate Audit	0
Regulatory Audit	2
Work Orders Open	0
Work Orders Closed	0
Training Hours	23,240
Orientations	347
Tool Box Talks	4,806
Observation Cards	7,044
BOP Op Drills	20
Emergency Drills	140
Waste Disposal Tickets	0

TRIR
0.85

LTIR
0.85

2021 Operating Hurdles

Direct Impact of Israeli Pandemic Measures

- Logistical Difficulty
  - Import/Export
- Shutdowns in Israel
  - Airport and Port Closures (5)
  - Complete Lockdowns (2)
- Increased expense relating to quarantine
  - Government approved Hotels
  - Catered Meals
  - Personnel expenses not related to drilling activity
- Quarantine
  - Regardless of PCR results and vaccination status, all personnel had to quarantine upon entry into Israel
  - Changed to 3-day quarantine and 2 negative PCR tests towards the end of the project

Direct Impact of Global Supply Chain Disruptions

- Increased expense to have equipment in country before it was needed
  - Standby Costs
- Manufacturing Backlog
- Delays in receiving “hot shot” items
- Overall- drastic inflation of cost from normal drilling operations
- Zero scheduling flexibility
  - Call outs weeks and months in advance instead of the standard 72-96 hours
  - Call outs are when services or personnel are asked to be on location

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Post Drilling Operations

- Feasibility Study
  - Understanding the subsurface conditions
  - Further enhancing high potential production zones
- Design the completions and testing program
- Procure all equipment and personnel for completions and testing program
- Completed the final casing and cementing run on the final section of the well
- Currently engaged in the testing and completions program

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FAQ's

- Why not always drill with DwC?
  - The DwC bit is not strong enough to drill through hard formation for long periods of time. Once the bit is worn out, that is as far as you can go without slimming down.
  - The DwC bit is softer than other bits because it must be drilled out after use. The shale zone had a formation compression strength of 34,000 psi and the DwC bit was rated to 25,000 psi. Thus, the DwC bit wore out quickly compared to a normal PDC bits that exceed 50,000 psi compression strength.
- Why doesn't Zion disclose more information?
  - To protect the interest of our shareholders
  - Intellectual property includes: Depth, lithology, geology, seismic, interpretations, drilling plans, and technology being employed