

## GEV SUCCESSFULLY PASSES SECOND CRITICAL ABS TEST

### KEY HIGHLIGHTS:

- First “High-Pressure Test” for ABS Class Approval successfully passed on 10 August 2018
- Second “Bend & Friction Test” for ABS Class Approval now successfully passed
- Final third “Cyclic Fatigue Test” currently underway, completion expected this month
- Draft reports issued by ABS for final review
- ABS Approval program remains within original budget

Global Energy Ventures Ltd (**ASX: GEV**), leading developer of global integrated compressed natural gas (CNG) projects, is pleased to advise that it has successfully completed the second of three critical American Bureau of Shipping (ABS) tests underpinning the CNG Optimum Ship design. Testing has been carried out at the CFER Technologies testing facilities in Edmonton, Alberta, Canada.

The aim of the successfully completed “Bend & Friction Testing” was to verify that the CNG containment pipes in the hold of the ship can be forced together in such a way that the pipes will not move relative to each other, or relative to the ship, even in extreme seas. The test required applying a downwards force on the pipes (reflective of what would be done in an Optimum ship’s hold) to mobilise sufficient friction to prevent relative movement.

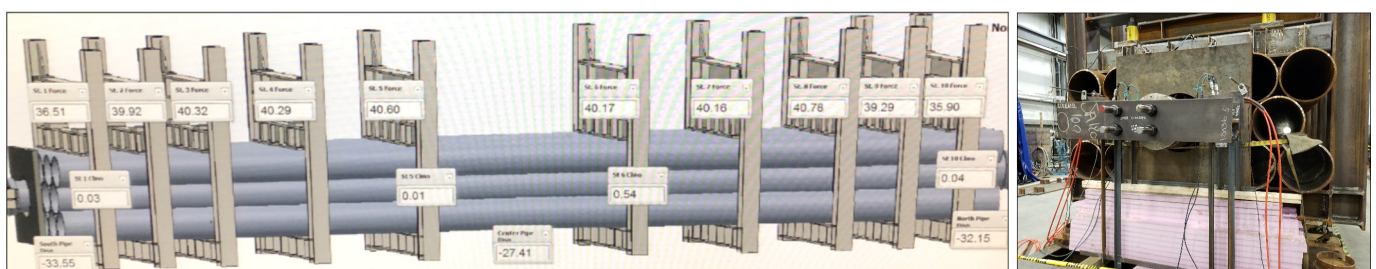
GEV Chairman & CEO Maurice Brand said “We are approaching the end of the ABS Full Class approvals process with outstanding results being achieved. Importantly GEV can now confidently move forward with the only remaining testing phase required before the CNG Optimum Ship design has been proved.”

### Bend Test

The bend test was to determine if the pipes, when forced together in the ship’s hull will prevent any movement of the pipes relative to each other and thus stiffen the ship. The rig was jacked up at either end and the deflections precisely measured. The predicted deflection at the midpoint was 5 mm. The actual deflection as measured was 5.45 mm. A perfect result. If the pipes did not prevent movement the deflection would have been significantly more (about 4 times more). This proves that the Optimum concept works as designed.

### Friction Test

The friction test showed that the required friction was achieved between each pipe. The test required applying a downwards force on the pipes (reflective of what would be done in an Optimum ship’s hold - to a pressure of 10 t/square meter), then pulling on the pipe in the middle of the bundle and trying to extract that pipe from the bundle. The force needed to move the pipe relative to the surrounding pipe was the critical measurement. This test confirmed that the required friction was achieved and that the system works as designed.



### **Cyclic Test (in progress)**

The “Cyclic Fatigue Test” comprises of three individual sub-tests required by the ABS Rules and Guidelines.

Long-term Fatigue Test: This long-term fatigue test requires cycling a representative pressure vessel for ten times the design life of the ship from minimum pressure to the operating pressure. For our 30-year ship life this means that our cycle test must recreate 300-years (20,000 cycles). This is an extremely rigorous test.

This test began in September with 8,310 cycles (42%) now completed.

Notched Burst Test after Fatigue: This test requires fatiguing a specimen through 3 times the design life (6,000 cycles) and then bursting the pipe with a machined notch embedded. This is proof of the pipes’ ductility. The test will run after the 20,000-cycle test is complete.

Cooled Burst Test after Fatigue: This a test requires fatiguing the specimen through 3 times the design life (6,000 cycles) and then bursting the pipe after it has been cooled to simulate the temperatures that would result from the Joule-Thompson cooling effect of gas escaping through a crack. The specimen has been made and this test will be run after the cycling of the notched burst test is complete.

In addition to the testing, two key reports have been completed in this period (final drafts issued for review):

1. The Structural Analysis of the ship, focusing on the novel midbody section, is complete and concludes that the design meets ABS Rule requirements. ABS carried out an extensive analysis over the past 7 months including both 2D and 3D finite element models. The report is over 200 pages. This was the most critical analysis work from an approval perspective.
2. The Risk Assessment final draft report has been submitted. The conclusion of the report was that there were no hazards identified that cause serious concern. This report supports the ABS Approval process.

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### **ABOUT GLOBAL ENERGY VENTURES LTD:**

The Company’s mission is to create shareholder value through the delivery of integrated CNG solutions to global gas markets. CNG is a well proven solution with technical and commercial advantages along with being safe and environmentally friendly. This will be achieved through the following actions:

- Continue the approvals process and ship construction for the GEV CNG Optimum Ship Design and maintain global leadership in marine CNG shipping;
- Pursue multiple CNG projects to improve the probability of success;
- Secure access to strategic gas resources that provides for an integrated CNG gas supply solution;
- Offer CNG project stakeholders flexible commercial arrangements;
- Employ world class management and staff that are leaders in their chosen discipline; and
- Maintain the highest standards of efficiency, safety and environmental responsibility.