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April 4, 2014

Intragaz Inc.  
6565, boul. Jean-XXII  
Trois-Rivieres, Quebec  
G9A 5C9  
CANADA

Attn: Sylvain Lacombe

Dear Mr. Lacombe:

**Re: Pointe-du-Lac Gas Storage Deliverability Enhancement Update**

Following our preliminary report of August 19, 2013, Sproule Associates Limited ("Sproule") had updated its analysis of the deliverability improvements at the Pointe-du-Lac gas storage facility (the Project) between August and November 2013. The final design of the Project included:

- Tie-in of the three northern wells B-57, B-297 & B-306;
- Installation of a 2520 HP compressor unit;
- Injection of additional natural gas to top-up the reservoir pressure to 740 kPag at the wellhead, and;
- Stimulation of certain wells to remove scale and improve productivity, as per a 2006 program.

Between August and November 2013, the Project was further analyzed and the simulation model was used to run additional forecasts:

- The tie-in of well B-306 rather than well B-57; and,
- The specific performance figures of the selected compressor (selection was made in October 2013).

To be conservative, two aspects of Intragaz's development plan were specifically not included in the final model forecast:

- 1) Well B-57 was excluded.
- 2) No provision was made to reflect the increase of the productivity of the wells that would result from an additional stimulation as was successfully done in 2006.

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Our analysis of the Project utilized an integrated simulation model (GASMOD) of the reservoir and surface network that was initially prepared and calibrated by PHH Petroleum Consultants (PHH-PC). PHH-PC joined Sproule in 2012 and Sproule had continued to use the model to support Intragaz. The model had provided an accurate match of the historical performance and was considered to be a reliable tool for predicting the future performance of the Pointe-du-Lac site under different development scenarios.

As indicated above, the final Project design was based on the tie-in of the three northern wells B-297, B-57 and B-306. In our preliminary report we had excluded well B-306 from the analysis (and included well B-57) mainly because it had produced water during testing. However, B-306 was projected to be a better well and further review was warranted.

Like B-306, other wells at Pointe-du-Lac had produced water early on, but they had recovered as water movement had been managed through operations. On this basis, the productivity of well B-306 was expected to significantly improve as the production of water diminished due to the decreasing water level that resulted from the injection of gas at this well. The following summarizes the significant reduction in the production of water that had occurred over time at the Pointe-du-Lac site.

Three years of similar, and large, gas withdrawal cycles were compared:

<b>Year</b>	<b>Gas Volume (10<sup>3</sup>m<sup>3</sup>)</b>	<b>Water Production (m3)</b>
1991-1992	38 156	1 287
2010-2011	37 189	117
2012-2013	38 265	68

Two conclusions were reached: 1) water production was a reality at Pointe-du-Lac and 2) clearly water production had diminished over time as Intragaz managed the water levels in the reservoir.

On this basis, it was decided to include B-306 in the model rather than B-57 because of its better potential and the historical evidence that water production could be managed and would decrease.

In terms of the operation of the Pointe-du-Lac site, Intragaz targeted a gas-water contact at about 60 meters below sea level, via a predetermined schedule for filling the reservoir after the winter withdrawal cycle. When the schedule was originally implemented the peak wellhead pressure was 740 kPag. The program had been successful at maintaining the desired water contact level, but the peak pressure had slowly declined to 718 kPag because of the gas movement towards other parts of the reservoir over the years. The model had matched this performance. The 740 kPag level could be reestablished by adding cushion gas.

Following our preliminary report, the model had also been updated to reflect the specific performance figures of the new compression unit, i.e. a 2520 HP unit that would be added

in parallel with the twin C-3 and C-4 units. The new proposed unit was similar to C-3 and C-4, but with slightly less capacity.

In summary, it was concluded that the final design of the Project carried minimal risk of not achieving the targeted performance levels. The simulation model clearly indicated that the addition of the proposed compression unit was sufficient to achieve the  $1\,600\,10^3\text{ m}^3$  maximum daily withdrawal objective while the tie-in of the three northern wells (B-57, B-297 and B-306, only two of which were included in the model forecast) enabled the desired profile by accessing a currently under exploited area of the reservoir. Increasing the peak reservoir pressure by adding cushion gas also contributed to achieving the desired performance.

The final design of the Project has been considered conservative because it included the following that were not part of the final simulation model:

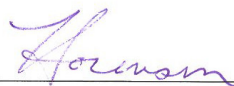
- Tie-in of well B-57;
- The possibility of performing additional stimulations of certain wells as was successfully done in 2006.

**Permit to Practice**

Sproule Associates Limited is a member of the Association of Professional Engineers and Geoscientists of Alberta and our permit number is P00417.

Sincerely,

**SPROULE ASSOCIATES LIMITED**



Frank Sorensen, P.Eng.  
Manager, Reservoir Studies and Partner  
Project Leader