

Appendix A: Statement of blind test experiment process

A signed statement of the blind test experiment process is available with supplementary data on Dataverse (Barchyn and Hugenholtz, 2020).

Please note one typographic correction was made to the reported data during analysis. For experiment 7, there were two duplicate 3W-2 entries and one 3W-1 entry. As there are 3 wells in the 3W equipment group (3W-1, 3W-2, 3W-3), we corrected the last duplicate 3W-2 to 3W-3. In this experiment 3W-3 was not emitting. If this typographic error was included in results, the number of equipment flagged, but not emitting in Table 3 would be one less (229 instead of 230), with impact on margin sums. Other results would remain unchanged.

Appendix B: Statement of project contributions

To further clarify the roles of contributors to this project and ensure full transparency on roles, we include a statement of contributions. Contributors did not have any roles beyond those listed.

University of Calgary PoMELO team

Thomas Barchyn: Development of PoMELO system, operation of PoMELO system at METEC, analysis of results, preparation of this report.

Chris Hugenholtz: Development of the PoMELO system, preparation of this report.

Colorado State University METEC team

Clay Bell: Development and maintenance of METEC site, development of single-blind test configurations, operations of METEC tests.

Aidan Duggan: Development and maintenance of METEC site, development of single-blind test configurations, operations of METEC tests.

Appendix C: Statement of interests

Thomas Barchyn and Chris Hugenholtz are the lead developers of the PoMELO system. The system is presently undergoing commercialization at the University of Calgary. It is possible that the system may be adopted by a commercial provider and following the intellectual property policies at the University of Calgary there is a future possibility that Thomas Barchyn and Chris Hugenholtz may benefit from commercial operations directly or indirectly.

As University of Calgary employees, the Thomas Barchyn and Chris Hugenholtz are bound by the Research Integrity Policy: https://www.ucalgary.ca/policies/files/policies/research-integrity_0.pdf.

Appendix D: Acknowledgements

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