

19 March 2018

Dr Tom Hatton
Chair
Independent Scientific Panel Inquiry into Hydraulic Fracture Stimulation in Western Australia 2017
Locked Bag 33
Cloisters Square,
Perth WA 6850

Dear Dr Hatton

CSIRO recently completed a report on the shale gas well life cycle and well integrity for the Independent Scientific Inquiry into Hydraulic Fracturing in the Northern Territory (**Northern Territory Inquiry**). This report will be included in the appendices to the Northern Territory Inquiry's final report and is also available from CSIRO's publication repository (<https://publications.csiro.au/rpr/pub?pid=csiro:EP179028>).

The report was completed in early December 2017 and provides an up to date overview of the shale gas well life cycle, including hydraulic fracturing operations, and well integrity. The report reviews the available literature on well integrity failure mechanisms and well integrity failure rates. Regulatory frameworks in Australian jurisdictions are briefly discussed, along with policy options for regulation related to well integrity.

While the report was prepared for the Northern Territory Inquiry and focussed on shale gas wells, the topics are applicable to well integrity in other jurisdictions and to other petroleum resources where hydraulic fracturing is used (tight gas for example). The report makes the observation that well integrity risks are dependent on the geological characteristics of the resource being developed, and need to be considered on a case by case basis.

Regards,

A handwritten signature in black ink, appearing to read 'Cameron Huddleston-Holmes'.

Dr Cameron Huddleston-Holmes
Senior Research Scientist
Onshore Gas Program
CSIRO Energy