

# Impacts of CO<sub>2</sub> and H<sub>2</sub>S on the risk of hydrate formation during pipeline transport of natural gas

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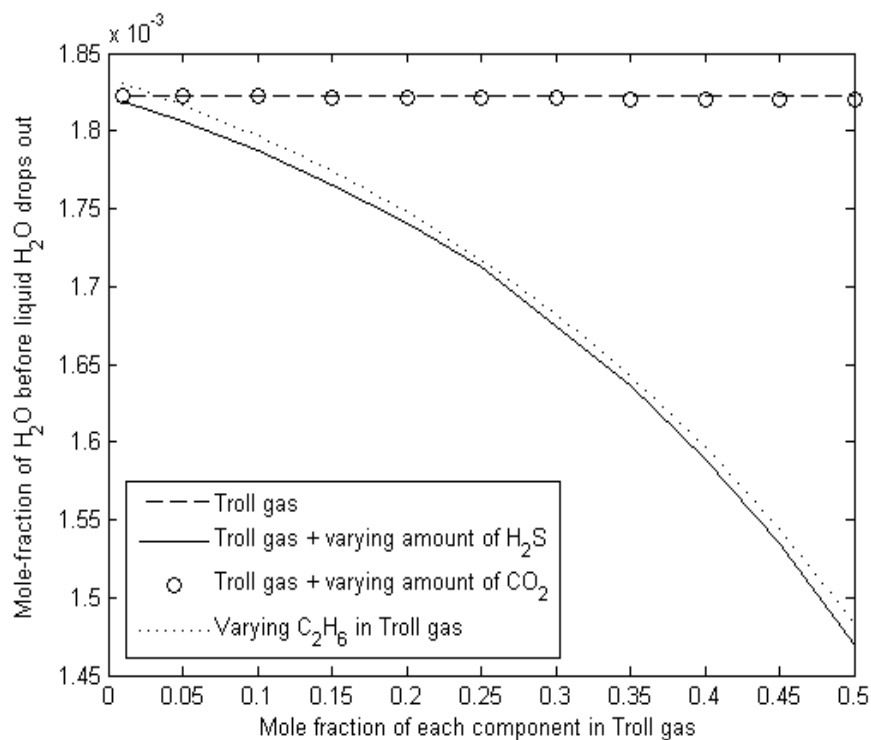
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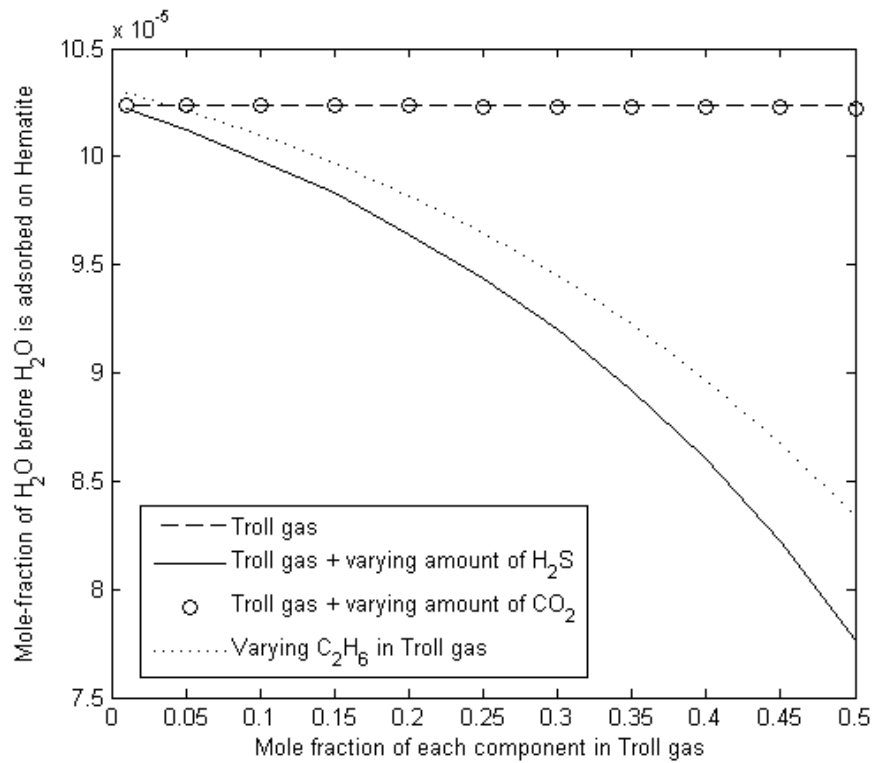
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## Electronic Supplementary Material

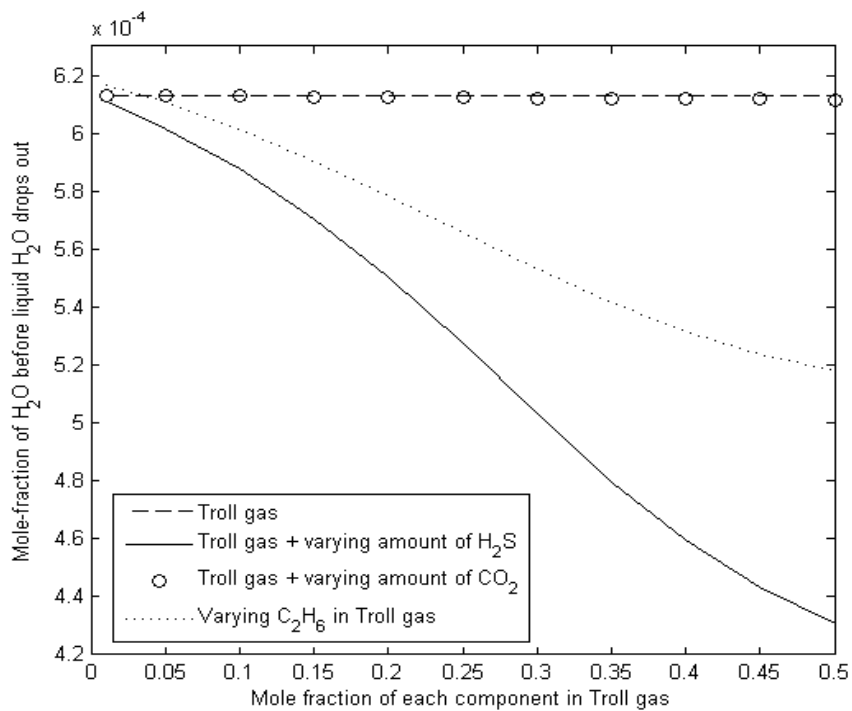
### Appendix A



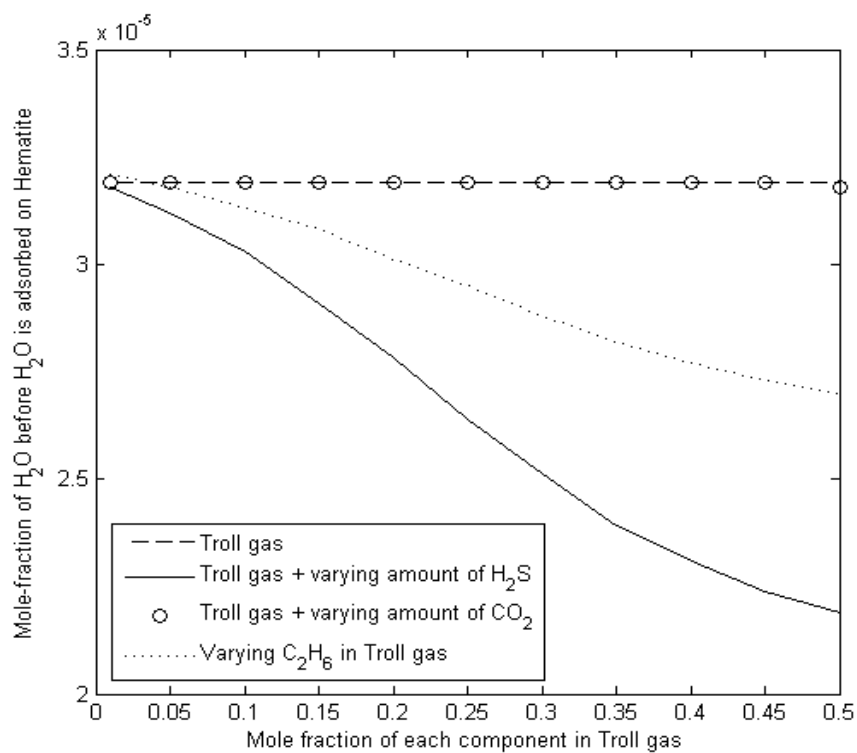
**Fig. A1** Impacts of introducing varying concentrations of H<sub>2</sub>S and CO<sub>2</sub> and impact of varying the amount of C<sub>2</sub>H<sub>6</sub> in Troll gas in respect of maximum content of water permitted before liquid water drops out at 50 bar and 280 K



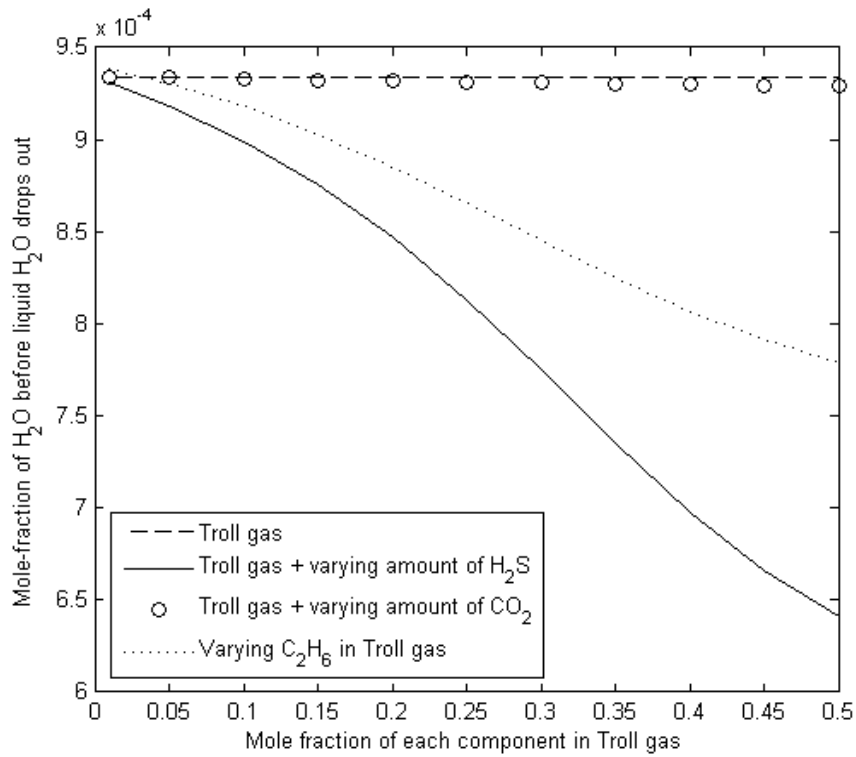
**Fig. A2** Impacts of introducing varying concentrations of H<sub>2</sub>S and CO<sub>2</sub> and impact of varying the amount of C<sub>2</sub>H<sub>6</sub> in Troll gas in respect of maximum content of water permitted before liquid water is adsorb onto Hematite at 50 bar and 280 K



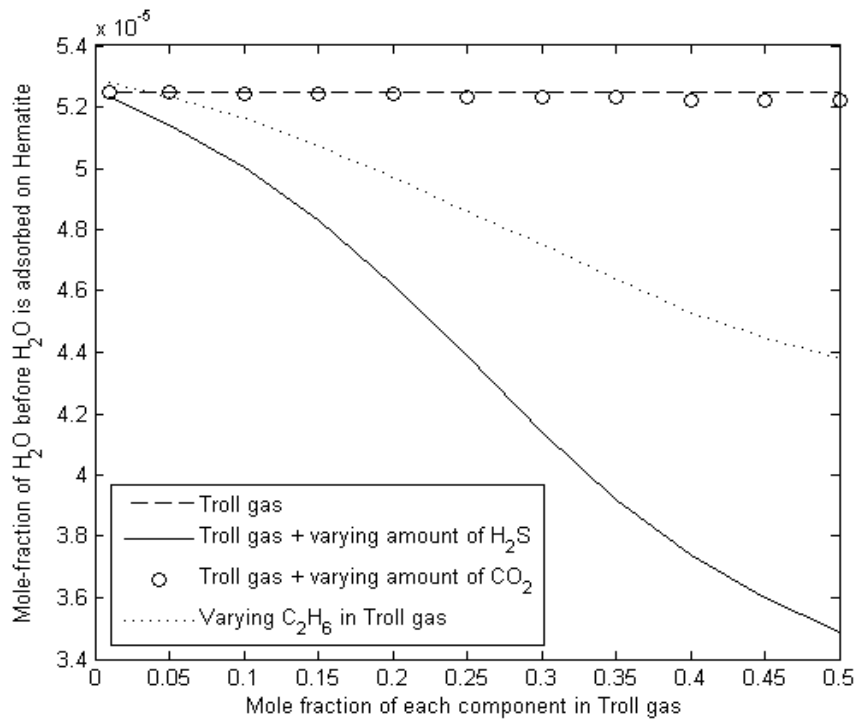
**Fig. A3** Impacts of introducing varying concentrations of H<sub>2</sub>S and CO<sub>2</sub> and impact of varying the amount of C<sub>2</sub>H<sub>6</sub> in Troll gas in respect of maximum content of water permitted before liquid water drops out at 130 bar and 274 K



**Fig. A4** Impacts of introducing varying concentrations of H<sub>2</sub>S and CO<sub>2</sub> and impact of varying the amount of C<sub>2</sub>H<sub>6</sub> in Troll gas in respect of maximum content of water permitted before liquid water is adsorb onto Hematite at 130 bar and 274 K



**Fig. A5** Impacts of introducing varying concentrations of H<sub>2</sub>S and CO<sub>2</sub> and impact of varying the amount of C<sub>2</sub>H<sub>6</sub> in Troll gas in respect of maximum content of water permitted before liquid water drops out at 130 bar and 280 K



**Fig. A6** Impacts of introducing varying concentrations of H<sub>2</sub>S and CO<sub>2</sub> and impact of varying the amount of C<sub>2</sub>H<sub>6</sub> in Troll gas in respect of maximum content of water permitted before liquid water is adsorb onto Hematite at 130 bar and 280 K