**Supplementary Material**

Table 1. Quantification of Acid-Producing Bacteria (APB), Sulfate-Reducing Bacteria (SRB), and General Anaeorobic bacteria (GANB) in Produced Water (PW) samples.

|  |  |  |
| --- | --- | --- |
| **Microbial Group** | **Quantification (NMP/mL)** | |
| **p\_1.00** | **p\_2.75** |
| Water | Water |
| APB | 4.3 x 106 | 4.3 x 106 |
| SRB | 2.3 x 105 | 2.3 x 105 |
| GANB | 2.3 x 105 | 2.3 x 105 |

Sample Points (height): 1.00 m (p\_1.00); 2.75 m (p\_2.75)