**Visual Cell Test Log File**

**Test No:** 1st Test

**Description:**

 Testing strength of NaCl brine based BIOS solutions in reservoir temperature (80$℃$)

**Date:** 1/17/2023

**Time:** 20:00 PM

**Number of Samples:** 4

**Samples:**

 200k ppm NaCl, 200k ppm NaCl+10% vol BIOS, 100k ppm NaCl, 100k ppm NaCl+10% vol BIOS

**Sample Preparation:**

1 lit of each 100k and 200k ppm NaCl brine were prepared, 225 ml of both brines were separated and 26.4 gr of BIOS were added to each of them, using a stirrer (1hr) two 10% vol BIOS solutions were prepared (200k ppm NaCl+10% vol BIOS and 100k ppm NaCl+10% vol BIOS)

**Log:**

|  |  |  |  |
| --- | --- | --- | --- |
| **No.** | **Date** | **Time** | **Description** |
| **1** | 1/17/2023 | 15:00 | Setup preparation + Adding samples to cylinders |
| **2** | 1/17/2023 | 20:00 | Start of the test |
| **3** | 1/17/2023 | 20:30 |  Cell Pressurizing up to 200 psi  |
| **4** | 1/18/2023 | 07:30 | Cells passed the pressure test  |
| **5** | 1/18/2023 | 08:30 | Depressurizing and increasing temperature step wise up to 55 $℃$ |
| **6** | 1/18/2023 | 13:30 | Pressurizing up to 200 psi and increasing temperature up to 80 $℃$  |
| **7** | 1/18/2023 | 14:30 | After reaching the reservoir temperature Bios solutions showed immiscibility toward the NaCl Brine(Pictures of phase separations can be found in the attachment file named “[Aqueous Stability Tests-T1.docx](Visual%20Cell%20Tests/Aqueous%20Stability%20Tests-T1.docx)”)  |
| **8** | 1/21/2023 | 08:30 | One of the cells failed to maintain pressure, other three were successful  |
| **9** | 1/21/2023 | 10:30 | For washing the cells, oven were turned off and cooling process began |