## **Supplementary data**

Summary of core data

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Core name(This study) | Core name(Alqudah et al., 2015) | Location | Cored thickness(m) | Age(Alqudah et al., 2015) |
| C1 | **-** | CW | 169 |  |
| C2 | **-** | CW | 201 |  |
| C3 | OS23 | CW | 255 | Eocene |
| C4 | **-** | CW | 217 |  |
| C5 | OS22 | CW | 232 | Eocene |
| C6 | **-** | CW | 246 |  |
| C7 | **-** | C | 293 |  |
| C8 | OS28 | CE | 185 | Maastrichtian-Eocene |
| C9 | **-** | CE | 276 |  |
| C10 | **-** | CE | 263 |  |
| C11 | **-** | SE | 137 |  |
| C12 | **-** | SE | 161 |  |
| C13 | OS2 | SW | 202 | Maastrichtian |
| C14 | OS1 | SW | 183 | Maastrichtian |
| C15 | **-** | SW | 192 |  |

Sampling of Fracture Bitumen (FB) and Matrix Bitumen (MB)

