



**S2 Fig: Phylogenetic tree of near-complete Orca Basin archaeal 16S rRNA gene clone sequences.** Tree was constructed with the NJ method. Bootstrap values are displayed next to nodes. Only bootstrap values of >50% shown. **OBSS:** Orca Basin south sub-basin hypersaline sediment (MUC 6), **OBNS:** Orca Basin north sub-basin hypersaline sediment (MUC 7), **OBRS:** Orca Basin saddle area red sediment (MUC 8), **OBPS:** Orca Basin saddle area pink sediment (core 4650-24). **OBSG:** Orca Basin saddle area sponge garden (core 4650-3) For sites with multiple sequences > 97%, number of clone sequences per OTU are indicated in parentheses.