

Biooxidation of sulphide under denitrifying conditions is a key process in control of souring in oil reservoirs and in treatment of gas and liquids contaminated with sulphide and nitrate. The effect of nitrate injection on the microbial community has already been evaluated in offshore oil industry production, but has never been studied in onshore such as Algerian oilfield. In this work, the SRB consortiums isolated by inoculating saline Postgate's medium C with injected water obtained from the In Amenas oil field, situated in the South Eastern Algerian Sahara was tested in the presence of sulfate, when nitrate was dosed at 120 mg/l it was reduced by this consortium bacteria, with some ammonium production. Therefore, this mechanism could be important in oilfield systems where nitrate is applied to prevent sulfide generation by SRB which leads to reservoir souring. In static tests the influence of this SRB consortium bacterium on corrosion was assessed using carbon steel coupons, in the presence of sulfate and in the presence of sulfate with 120 mg/l nitrate. Furthermore, the occurrence of pitting corrosion was fairly low under this circumstance