Main changes brought to the manuscript bg-2014-106 after the reviews

We have already posted our answers to the reviewers' comments and we took into account all the suggested minor changes and corrections. The two reviewers suggested to add some comments on the mineralogy and on the microbiology data that indeed are reported in separate papers (either in press or submitted at the time we write this letter). We here describe for clarity the main modifications brought to our manuscript after the reviews.

- The tile of our paper has been changed to "Fluid chemistry of the low temperature hyperalkaline hydrothermal system of the Prony Bay (New Caledonia)". Throughout the paper Prony Bay is now written as a proper name.

- Due to her implication in the science and in the discussions of the present manuscript, we felt that Céline Pisapia deserved to be a co-author of the paper, so we added her name in the authors' list.

- We included the following few lines in page 6243 at line 5:
" Our observations (Pisapia et al., 2013, in prep) indicate that, at the Bain des Japonais, there is a marked dominance of brucite, along with the formation of aragonite. Minerals in lesser amounts include magnesium carbonates and double layered hydroxydes (nesquehonite, hydrotalcite, iowaite). Such mineral assemblages are also observed in the concretions collected at the deep sites actively discharging the high pH fluids. When the vents are no longer active, seawater can percolates deeper into their structure therefore modifying the mineralogical composition of the concretions, with an increasing amount of calcite.

- Following the comments of the second reviewer we added the following text in the discussion section in page 6244:
" Various degrees of mixing of the alkaline fluid with oxygenated ambient seawater also provide potential electrons acceptors (such as sulfates, nitrates or oxygen) crucial for many microbial metabolisms. This was recently evidenced by a molecular survey conducted on Prony concretions (Quéméneur et al., in press) which showed the dominance of microbial metabolic groups using either of H2 or CH4 as electron donors for their growth under the anaerobic conditions found in the high pH fluids. These metabolic groups notably include Methanosarcinales, a group of archaea including both hydrogenotrophic methanogens and members responsible for the anaerobic oxydation of methane, a reaction thermodynamically unfavorable unless coupled with sulfate or nitrate reduction via syntrophic association (consortia) with sulfate or nitrates reducing bacteria (Knittel and Boetius, 2009). Remarkably the Methanosarcinales described in Prony are very similar to those previously detected in the Lost City hydrothermal field (Brazelton et al., 2006a; Schrenk et al., 2004). In the high pH springs of the Prony Bay, sulfate-reducing bacteria of the delta-proteobacteria group are also well represented (Quéméneur et al., in press) as is the case at Lost City (Brazelton et al., 2006a). Aerobic respiration of hydrogen or methane (and other C1 compounds) is also most likely active in the concretions as strongly suggested by the abundance of sequences related to hydrogenotrophic bacteria of the Burkholderia class, such as Hydrogenophaga and many taxa representing methylotrophic bacteria (Quéméneur et al., in press)."