

Quantitative Investigation of Aqueous Organic Compounds in Ridge-Crest Hydrothermal Fluids

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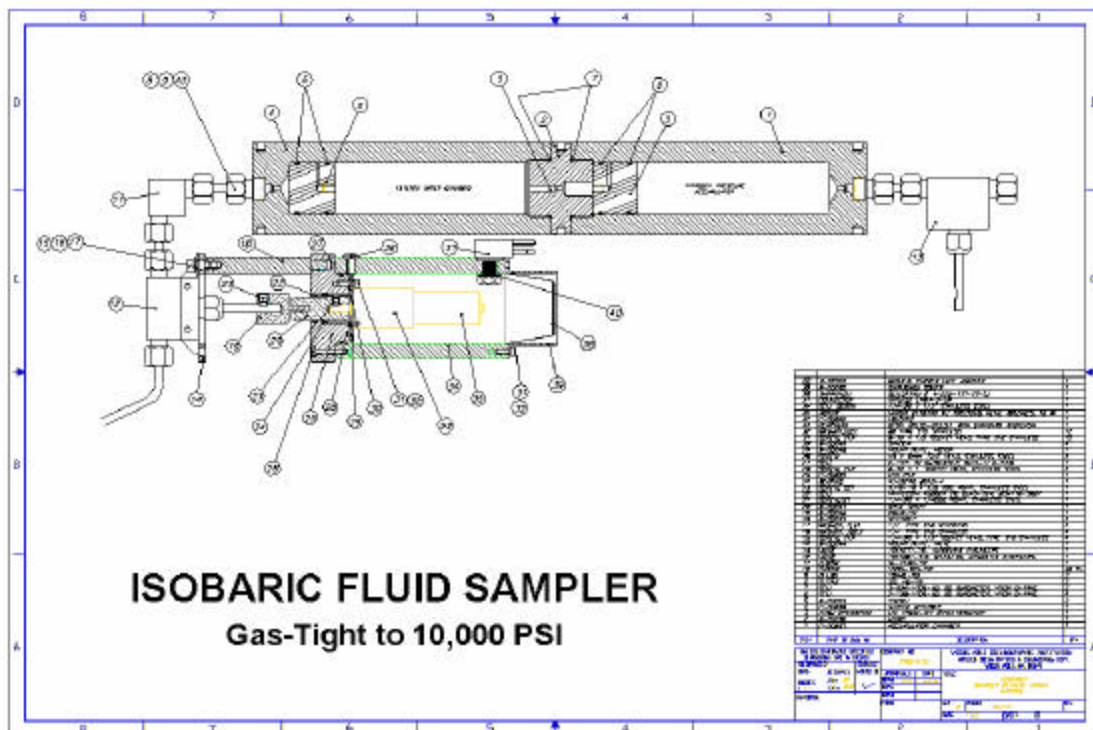
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Goals:

- Develop a gas-tight fluid sampler for quantitative characterization of aqueous organic species
- Determine the composition and abundance of organics in Middle Valley and Endeavour vent fluids

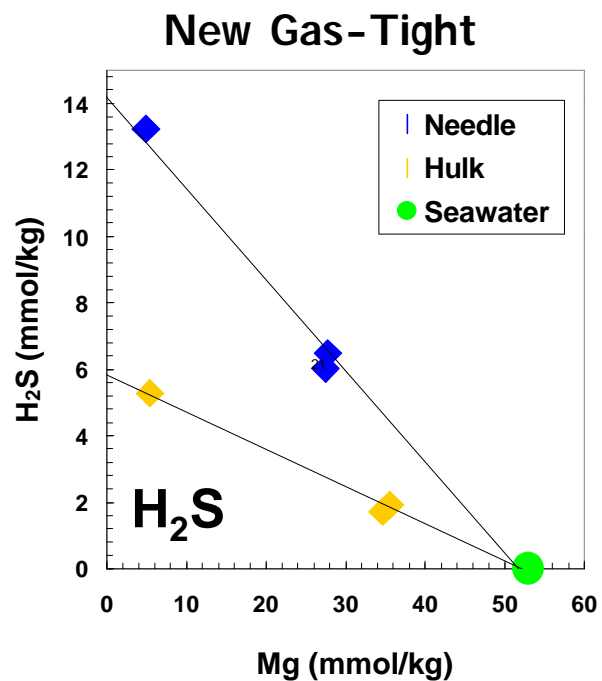
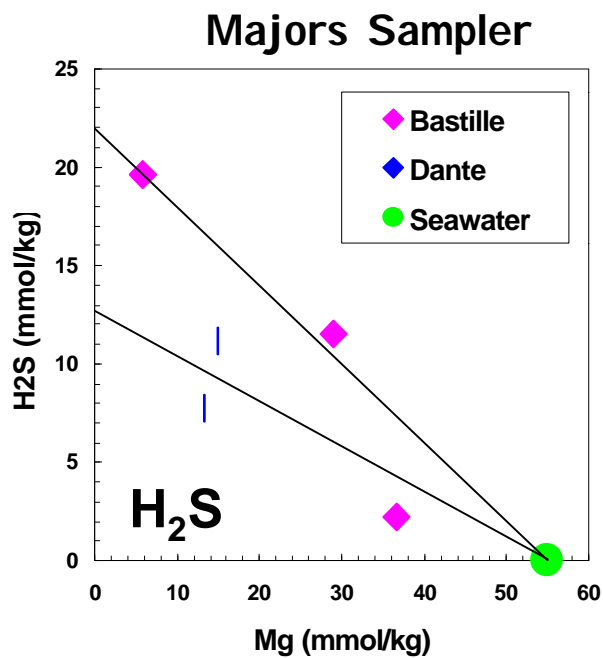
Motivation:

- Semi-volatile organic species
- Diffuse fluids require control of fill rate
- Eliminate separate major and gas-tight fluid samples



Results:

- Prototype tested in Sept. 1999
- 10 dives at Main Endeavour and Middle Valley, July 2000
 - Sampler deployed 35 times without a malfunction
 - Comprehensive dataset for quantitative characterization of aqueous organics



Suggestions:

- Functionality would be improved by a reliable, non-hardwired, off-the-shelf, digital communications device such as ICL