

9/19

w/ P. Murray, Dave, Regina, Duncan
 RE: UTAH H₂O Sampling Program

P.M. wants to sample from Pt. of Mtn → N along Wasatch Front
 also wants samples of cold H₂O for mixing models
 and focus = Jordan Valley well samples
 esp. Draper, Granger, International Center Area

ESL will offer use of ICP analyses
 PM may take duplicate samples
 will analyze w/ different methods + different companies
 i.e. evaluate cost benefit vs. accuracy

PM stressed need for complete analyses
 most UTAH springs already sampled for random suites

Cl⁻, HCO₃⁻, CO₃⁻, SO₄⁻, H₂S, CO₂(?), SiO₂, pH

Field measurements

esp. for far away fields

UTAH samples OK just to measure w/ ICP

ESL Function

Low T^o Exploration Models

what works - what doesn't

cost effectiveness etc.

Sample frequency

changes in H₂O chemistry w/ ^{diurnal} seasonal variations ??

this should be monitored w/ samples throughout
the year

DM agreed to do seasonal sampling as time
allows

ESL may do some of the sampling as
necessary

Filtration Requirements

- Isotopes

should be unfiltered unless really dirty

100 - 250 ml

let fines settle out + decant

seal so won't evaporate

S isotopes must be done in the field

will concentrate on O+H

sinker samples good for O+H too

geothermometer then time based on sinker stratigraphy

CO_3 - O^{18} Fractionation best geothermometer for

low T° - paleogeothermometer a la sea H₂O