

HLWYM HEmails

From: David Pickett
Sent: Tuesday, May 10, 2005 4:41 PM
To: Murphy, William
Subject: RE: questions attached
Attachments: Uth age map.pdf

Bill,

Can we talk tomorrow? Quick (and incomplete) answers to your questions:

- I'll trust your judgment vis-a-vis thermo data, but we should talk.
- Caliche ages are Th-230. Amending the figure to say "Opal and Calcite (20-130 ka)" would be more or less appropriate. What is notable about the caliche ages is that, in almost all cases, the carbonate and non-carbonate fractions have similar ages. XRD says the non-carb is quartz - my XRD knowledge is limited, but doesn't this mean there could be other silica phases?
- Attached is the map of caliche, calcite, and opal ^{230}Th - ^{234}U - ^{238}U ages.
- In the $^{234}\text{U}/^{238}\text{U}$ vs U plot, "carbonates" means calcite and caliche.
- Prior to 8000 y, I-129 and Tc-99 dominate the dose. Yes, 18 km. "Groundwater" dose is from consuming water - but it may also include irrigated plants and dust from irrigated soil. I'm not absolutely sure. But no volcanism.

David

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From: David Pickett

Created By: dpickett@cnwra.swri.edu

Recipients:
"Murphy, William" <WMurphy@csuchico.edu>
Tracking Status: None

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Uth age map.pdf	401529	

Options
Priority: Standard
Return Notification: No
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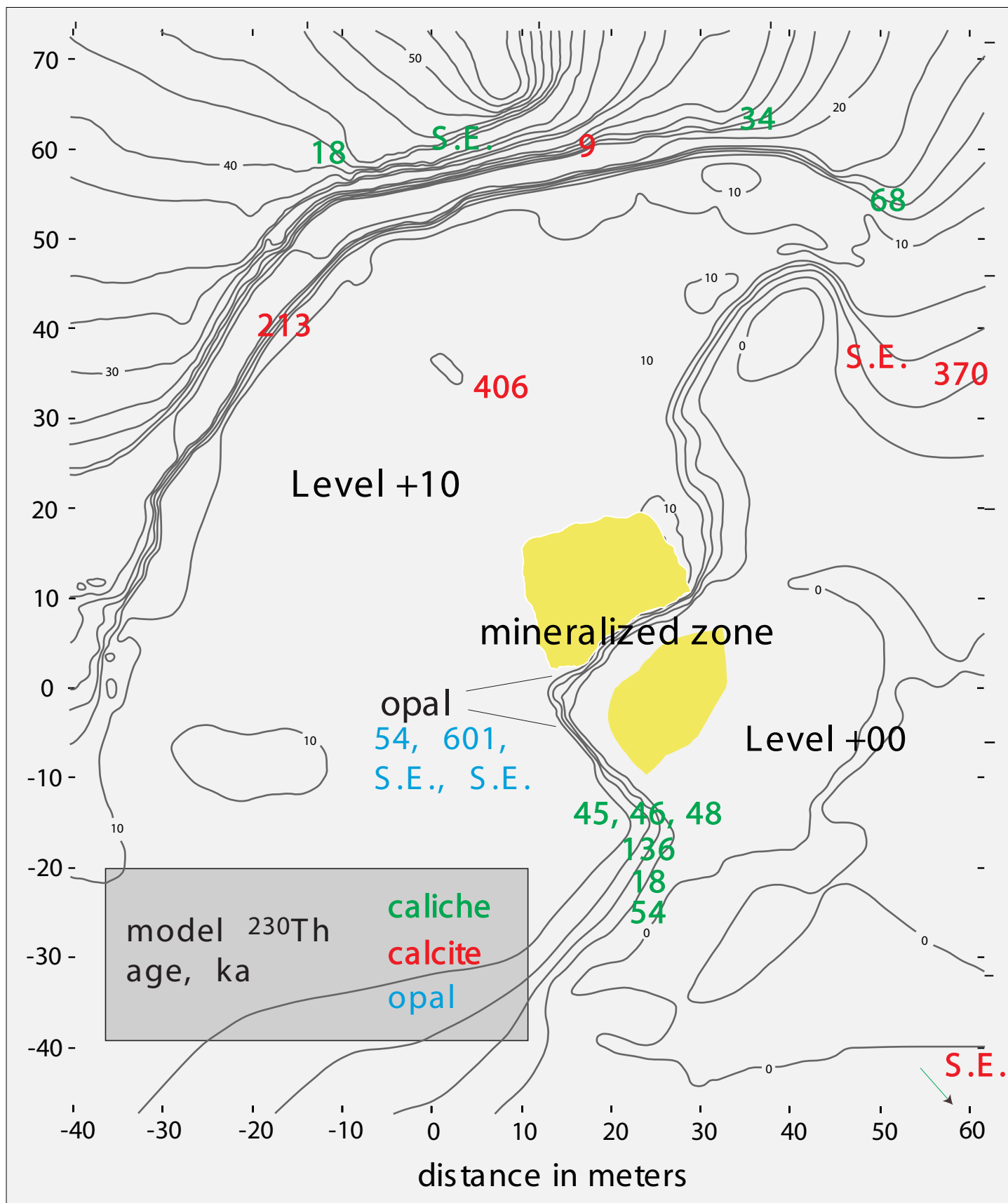


Figure 4. Map of Nopal I uranium deposit with ^{230}Th - ^{234}U - ^{238}U model ages in thousands of years. "S.E." indicates secular equilibrium within uncertainty.