

Re: Volcano Questions

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- *From:* "George" <george@xxxxxxxxxxxxxxxxxxxxxxxx>
 - *Date:* Sun, 19 Mar 2006 13:25:37 GMT
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"Daniel Platt" <DanP57@xxxxxxxxxxxxxx> wrote in message
[news:kLrSf.1903\\$ff5.552@xxxxxxxxxxxxxx](mailto:news:kLrSf.1903$ff5.552@xxxxxxxxxxxxxx)

William Oertell wrote:

"SBC Yahoo" <atilla.the.hun@xxxxxxxxxxxxxxxxxxxx> wrote in message
[news:hyDRf.56496\\$Jd.21888@xxxxxxxxxxxxxxxxxxxxxxxxxxxxxx](mailto:news:hyDRf.56496$Jd.21888@xxxxxxxxxxxxxxxxxxxxxxxxxxxxxx)

"SBC Yahoo" <atilla.the.hun@xxxxxxxxxxxxxxxxxxxx> wrote
in message
[news:A00Qf.74702\\$PL5.2498@xxxxxxxxxxxxxxxxxxxxxxxxxxxxxx](mailto:news:A00Qf.74702$PL5.2498@xxxxxxxxxxxxxxxxxxxxxxxxxxxxxx)

Magma feeding the volcano's magma chamber comes from the highly pressurized outer core, which is a liquid composed of metals and reduced silicon. The pressure is resultant of the burden above the outer core

and

the force of gravity, I believe. Pressure acts in 360 degrees, so the liquid material in the outer core will find the point of least

resistance,

and begin to migrate out of the outer core towards the surface. When it erupts onto the surface of either a continental plate or a oceanic

plate,

it becomes a volcano, spitting out lava. The

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process of the magma

making

it's way towards the surface along conduits like faults, fissures, etc. will cause tectonic activity, by the magma placing force on existing plates/structures already in some stressful situation, due to existing tectonic activity. This results in earthquakes, which is why

earthquakes

or seismic events proceed most (if not all) volcanic eruptions.

Not all volcanoes explode onto the surface, some just ooze or flow out, after breaking through the surface. Some blow a small chunk of the mountain away and then just flow lava down the sides of the mountain. What causes a volcano to explode in a massive, violent eruption, sending million of tons of debris into the air? Does magma build up in a

chamber

(magma chamber) until some event triggers a explosive eruption?

And further, it appears to me that as billions of cubic feet of magma

are

discharged from the outer core, that those continental and oceanic

crusts

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being assimilated into the mantle would in turn cause some of the mantle to be assimilated into the outer core, since there must be a material balance, mass is not being created in the core, and it is not a empty

hole

after discharging magma. I would think the material balance of the

outer

core has remained relatively the same for most of the 4.7 billion years the planet has been here, which means something must replace what is belched out in volcanoes over the years. Gravity would tend to cause

the

dense metals (nickel, iron cobalt, etc.) to be drawn into the outer

core,

along with other material "along for the ride".

After looking at the USGS map of volcanoes in the western US, they all

line

up in a line parallel to the pacific coast and the pacific plate, where it interacts with the oceanic plate. I suppose conventional volcano theory would explain why there are no volcanoes in Kansas.

Has any volcano been found away from interacting plate zones (difficult to

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explain using the conventional theories)? For instance in someplace like Kansas where the nearest plate is on the dinner table, or perhaps on the seafloor, nowhere near interacting plates?

Let's not forget Hawaii and Yellowstone.

OK -- time to hijack thread.

I've noted that Yellowstone, Long Valley, Valles, Fish Canyon Tuff/La Garita, San Juan Mountains, etc, are all examples of humongous volcanic systems that have not been associated with continental subduction. I've gotten a kick out of simply trying to identify some of these features using "Google Earth."

One such system is between Butte and Helena, MT. When playing with Google Earth, I noticed a large oval feature roughly 150mi x 250 mi, that is bounded by the Big Belt Mountains, Beaverhead and Sapphire Mountains (next to Bitterroots), with long axis running from Missoula through Butte down to Yellowstone. If you back up to about 600mi on the display, you see the oval quite clearly -- it fills up the whole sw corner of Montana. The shape seems to strongly suggest an oval, but its orogeny may not all be volcanic -- I'm curious if anybody can explain this to me?

Dan

Didn't you post this elsewhere? And wasn't the answer that what you are referring to is mostly pre-Cambrian? I seem to recall that that was the case. Correct me if I'm mistaken.

George

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