

has been shown that only a few days at above 400°C and up to about 20 kbars are sufficient to cause complete conversion of stishovite to quartz; at slightly higher pressures complete conversion to coesite would result. It has also been shown that at temperatures below 225°C stishovite is resistant to conversion to other crystalline phases despite the use of shearing forces, mineralizers, and pressure. It is inconceivable that any known geological process could bring material from such depths without subjecting it to long dwell times in p-t regions that would bring about the complete alteration of any stishovite being so transported.

All these facts support the hypothesis that naturally occurring stishovite can only be formed by impacts of great magnitude and consequently is a very good index mineral for identifying astroblemes.

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