

ments, it is more likely, he says, that circulating groundwater provided the carbon in the form of dissolved bicarbonates.

"Of course," says Valley, "the dominant test is whether or not we strike gas. If we strike gas, then all the rest of this is academic."

**A** gas strike at the Siljan Ring would force geoscientists to reconsider the explanation of the origin of petroleum and natural gas that has held dominion since the early part of this century. "This would be something like an earthquake in the conventional science establishment. People would have to go back to the drawing board . . . and ask what is the origin of it," says Martin Schoell of the Chevron Oil Field Research Company in La Habra, Calif.

Such a strike would not prove that oil and gas rise from the mantle, but it would raise the possibility that igneous and metamorphic rock contain significant reserves of oil and gas — an untenable statement in the past. "It would open up an exploration frontier in these types of rocks," says James R. White of the Department of Energy's Office of Fossil Energy.

White cautions, however, that the existence of these reserves and their accessibility both remain important unknowns in this field. "For that," he says, "we'll have to drill." □

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# Quantum Reality

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