Geological evidence for the Permian-Triassic (PT) - Impact Crater :

A number of scientists specialized in impact research already proposed, that the Siberian Traps, the largest eruption of continental flood lavas on Earth, may be better explained by a large Impact than by a conventional mantle plume. Unfortunately the scientists haven't found the impact crater yet ! With my study I want to proof that "Global Impact Events* are the primary cause for Plate-Tectonics (and Expansion-Tectonics) on Earth and on other

planets and moons of our solar system, and that such a Global Impact Event caused the formation of Continents and Oceans on Earth !

The hard evidence for the correctness of my hypothesis, will be the confirmation of the Permian-Triassic (PT) Impact Crater described in my study.

I have collected many Rock samples in order to proof my hypothesis : Images of this rock samples can be found on the following websites :

www.permiantriassic.de (or www.permiantriassic.at) -> This website should be active in March 2021 (please try it in the next months from time to time)

In the following I want to show now some extracts from a book written by the well-known impact researcher Prof. Dr. Christian Koeberl. These extracts will provide further indication and evidence for the Permian-Triassic (PT) Impact Crater and its effects, which I describe in my study !

The title of the book : "Impact Markers in the Stratigraphic Record" – Authors : C. Koeberl & F. Martinez-Ruiz (ISBN : 3-540-00630-3)

Here the extracts from the book :

Page 29 : Siderophile element anomalies (e.g. enhanced Ir contents) were found at some P-Tr boundary locations (e.g., Holser et al. 1989). And recent research succeded in demonstrating the P-Tr boundary event was a much shorter event than thought. At Meishan, China, a negative excursion in the carbon isotopic composition had a duration of less than about 160,000 years and suggested that it could be the result of the impact of an icy <u>carbon-rich comet</u>.

Page 29 : Kaiho et al. (2001) reported sulfur isotope and chemical data for samples from the Meishan (China) Permian-Triassic (P-Tr) boundary section. They interpreted S-isotope data, as well as the occurrence of Fe- and Ni-rich particles, as evidence for <u>a large-scale impact event that penetrated the Earth's mantle and formed a crater approximately **1000 km** in diameter.</u>

A number of scientists pointed out that the Sibirian Traps cannot be the result of a mantle plume (e.g. Czamanske et al. 1998, Sharma 1997, Elkins-Tanton and Hager 2000)

Page 109 : An impact event is also supported by evidence from extraterrestrial noble gases in fullerenes found in P-Tr boundary beds in China, Japan, Hungary.

Page 109 : Because there is a similar duality of signals between likely volcanic and impact sources at the P-Tr boundary, similar to the K-T boundary, the hypothesis of Impact Researchers should be tested, which claims that the Siberian Traps could have been caused by decompression melting at the impact site. And that impact volcanism can uniquely explain the dual signals in the geological record.

Page 110 : An indicative model of Impact Researchers shows that it is possible for the volume of decompressed mantle beneath a large ~ 200 km sized crater to greatly exceed the excavated volume of the impact crater itself, primarily due to reduction of lithostatic load. Under suitable conditions of geothermal gradient, this would lead to near instantaneous melting with volumes of the order of 10^6 km^3 , similar to the characteristic volumes of LIP's.

Page 110 : And the induced large-scale vertical and horizontal thermal gradients are expected to have a long-term effect on secondary mantle flow.

Page 111 : Decompression melting may contribute more melt than conventional shock melting.

Page 111 : We propose that the Siberian Traps, which are accessible and currently under considerable scrutiny, may be better explained by a large impact than by a conventional mantle plume. The closure of a former ocean between Siberia and Mongolia, as well as amalgamation with north and south China blocks may also have been occuring during Permian-Triassic times (\rightarrow and may be the result of a large impact event ! \rightarrow comment from H.K.Hahn)

Page 97 : <u>Decompression melting must be seriously considered whenever an impact is sufficiently large to cause the transient crater depth to excavate a substantial fraction of the local crustal thickness, and thereby cause a sudden drop in lithostatic pressure beneath the crater.</u>