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## Hydrogen and Oxygen Isotopes of Fluid Inclusion in Halite, Northern Shaanxi Salt Basin China

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The Ordovician was an important transitional period for global climate and organic evolution, the global was in the flood and glacial, Organism was extinction (Zhan, 2007; Trotter et al., 2008; Axel et al., 2010). Under the influence of glacial period other areas of the world are lack of such a large scale evaporates, for the special structure-climate-source, the basin is the only basin which have potash deposit in Ordovician.

Carbonate and evaporates are composed the Majiagou formation. Shaanxi basin is the classical stable craton marine facies basin. Majiagou formation can divide into six parts. Potassium mineral are mainly distributed in the fifth part (Chen, 2010; Liu, 1997). In this paper, the sample is from the fifth part.

The paper use the hydrogen and oxygen isotopes of fluid inclusion in halite to reactive the source and restructure the palaeoenvironment. The range of the  $\delta^{18}\text{O}$  is  $-0.2\text{‰}$  to  $-13.2\text{‰}$ , the average is about  $-6.027\text{‰}$ . The  $\delta\text{D}$  is  $-83\text{‰}$  to  $-158\text{‰}$ , the average is about  $-114.85\text{‰}$ . The date is located at the lower right of the line for the precipitation. It shows the environment is at the evaporate stage. The date reflect that ice may recharge the source.

Erdos basin is widely accepted in the Ordovician period is the largest marine sedimentary basin in China. Scotese said the basin is located at the  $15^{\circ}\text{S}$  in the Ordovician. It is in the subtropical section and the section is good for the evaporate. The environment of the Erdos basin is lagune.

Large scale supplement of the ice reflect that the surrounding excited large deposits of ice, which is corresponding to the late Ordovician's cold environment.

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