

Sequence Division and Eustatic Sea Level Change of Carberours-Permian Systems in Liaocheng, Shandong Province

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Abstract: In our study, we analyzed the drilling and well log data, found seven sequence boundaries, and divided six third-order sequences of the Neopaleozoic sedimentation by using the technology of sedimentology, paleontology, and stratigraphy. On the basis of this, we studied the reason and characteristics of change in eustatic sea level, indicating that the third-order sea level is affected mainly by glacier melt while the fourth-order sea level is formed mainly by the change of the third-order sea level or the lowering down of phreatic level. The oscillation of sea level and sediments supply are the main factors affecting the fifth-order sea level. Based on the coupling relation among sequence stratigraphy, the sea level, and the base-level cycles, we find that they are in good consistency. Affected by the change of the third-order sea level, the long term base level formed the third-order sequence. The fourth-order sequence under the control of the fourth-order sea level formed the system tracts. The fifth base-level cycles are controlled by the fifth-order sea level and formed tiny sequences.

Key words: sequence stratigraphic; the change of the sea level; the base-level cycles

中挪专家联合考察西北黄土高原区地质灾害

2009 年 4 月下旬, 挪威岩土工程研究所自然灾害部主任 Anders Solheim 博士等一行 4 人与中国地质调查局西安地质调查中心的专业人员对陕西、甘肃两省的地质灾害进行了为期 2 周的联合考察。

考察了包括陕西华县莲花寺滑坡、宝鸡簸箕山滑坡、延安虎头峁滑坡、甘肃洒勒山滑坡、黑方台滑坡等共 11 处地质灾害点, 参加考察的还有中国地质调查局及甘肃省地质环境监测院的有关人员。联合考察过程中, Anders Solheim 博士等对黄土滑坡的特点表现了极大的兴趣, 并就双方在该地区进行地质灾害风险减缓合作研究进行了具体的沟通和协商, 在此基础上签署了《中挪地质灾害风险减缓合作研究实施计划草案》。

本次联合考察活动是为落实中国地质调查局和挪威岩土工程研究所于去年 8 月签署的《地质灾害减灾合作备忘录》中的有关合作项目, 该项合作将持续三年。

(西安地质调查中心 唐亚明)