

地质勘探

膝褶、膝褶带、共扼膝褶带——一种可能的新型油气构造样式

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摘要:

受控于最大有效力矩准则的共扼膝褶带, 是各向异性岩石中较为常见的构造变形样式, 依据大量国、内外学者的研究资料及勘探实践成果, 结合膝褶带几何学、形成机制以及地球物理资料解释成果等综合分析认为, 大型膝褶带和共扼膝褶带可能被误解释为“两断夹一隆”的构造形态, 原先一些构造样式被解释为高角度逆冲断层的地方更可能是膝褶的枢纽带。研究结果认为, 膝褶带具备形成油气构造圈闭的物质条件, 可形成有利油气聚集区; 膝褶带和共扼膝褶带作为非主造山期构造在油气勘探和构造解释上应引起石油地质学家和地球物理学家的重视; 结合野外地质构造观测, 利用地球物理资料准确识别和区分膝褶带构造与断裂构造是寻找油气构造圈闭的新思路和新方法。

关键词: [膝褶](#) [膝褶带](#) [共扼膝褶带](#) [褶皱](#) [最大有效力矩](#) [含油气构造](#) [构造圈闭](#) [油气聚集区](#)

Kink, kink band and conjugate kink band: A probably potential new type of structural trap

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Abstract:

The conjugate kink band under the control of the Maximum Effective Moment Criterion (MEMC) is a common type of structural deformation in anisotropic rocks. Based on the previous study results and exploration practices, we comprehensively analyzed kink band geometry, formation mechanism and interpretation of geophysical data. It is believed that large kink band and conjugate kink band may be misinterpreted to be some kind of structural attitude with an uplift occurring between two faults. Some structural styles that were previously misinterpreted to be high angle reverse faults are more possibly of hinge zones of kinks. The kink bands have the conditions of forming structural traps, thus may be favorable hydrocarbon accumulation zones. As structures formed in non major orogenic period, kink bands and conjugate kink bands should draw the attention of petroleum geologists and geophysicists during exploration and structure interpretation. Accurate identification and discrimination of kink bands from faulted structures by using geophysical data and in combination with field observation of geological structures is a new idea and methodology for searching for structural traps.

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