

## 地质勘探

陆相坳陷型湖盆层序地层特征及勘探有利区——以准噶尔盆地腹部陆西地区清水河组一段为例

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摘要:

层序识别模式和地层叠置样式的建立对于坳陷湖盆岩性地层圈闭的预测与勘探具有重要的指导意义。为此,以准噶尔盆地腹部陆西地区下白垩统清水河组一段为例,通过研究其不同沉积体系的充填过程及叠置关系,建立了坳陷型湖盆的层序地层格架及其发育模型:①低位体系域发育,沉积物供给充足,缓坡背景发育广泛的河道侵蚀地貌,下切谷发育,在古地貌剥蚀洼陷内(残余可容纳空间)与构造单元转换的斜坡带发育大套辫状河三角洲沉积和水分流河道砂砾岩沉积,侧向连续分布,油气勘探上应以寻找背斜构造油气藏为主;②基准面逐渐上升,水进体系域物源供给逐渐减弱,发育退积型的正常河流三角洲体系,易形成上倾尖灭型、盆底滑塌扇型岩性地层圈闭;③高位体系域基准面经历上升—停滞的过程,物源供给逐渐增强,发育进积型的正常三角洲和河流沉积体系。结论认为:水进体系域是该区岩性圈闭勘探的最有利层序,分布在凸凹转换部位凹陷一侧的滑塌体具备良好的顶底板条件,是目前现实的勘探有利区。

关键词: [坳陷型湖盆](#) [层序地层学](#) [层序划分](#) [岩性地层](#) [圈闭](#) [体系域特征](#) [三角洲沉积](#) [准噶尔盆地](#) [早白垩世](#)

Sequence stratigraphy characteristics of continental depression lacustrine basin and favorable plays: A case study of the first member of Qingshuihe Formation, Luxi area, Junggar Basin

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Abstract:

Sequence identification models and stratigraphic overlapping patterns are of great significance to lithologic stratigraphic trap prediction and exploration in depression lacustrine basins. Taking the first member of the Cretaceous Qingshuihe Formation in the Luxi area, Junggar Basin, as an example, we built sequence stratigraphic framework and models of depression lacustrine basins based on the study of filling processes and overlapping relationships of different sedimentary systems. (1) During the lowstand system tract (LST), sediment supply was abundant (A/S being far less than 1), channel erosional topography was well developed in a ramp setting, while downcutting valleys were under developed. Thick braided delta and underwater distributary channel sandstone and conglomerate with lateral continuity were developed in erosional palaeotopographic lows (relic accommodation) and slope zones in the transitional zone between structural units. Anticline structural traps are the major exploration targets. (2) Sediment supply decreased progressively during the transgressive systems tract (TST) along with the base level up going. Retroregional normal fluvial delta deposits were accumulated. Lithologic stratigraphic traps of updip pinch out type and basin floor slump fan type are possible exploration targets. (3) Sediment supply increased progressively during the highstand system tract (HST). Transgressive normal delta and fluvial sedimentary systems were developed. It is believed that the sequences of TST are the most favorable for lithologic stratigraphic trap exploration and the slump deposits with good top and bottom seals on the depression side of transitional zones are favorable plays.

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