

The karst reservoir evolution and genesis of abnormal high permeability zone of the upper Cretaceous Khasib formation in central Iraq**Du Yang**

Southwest Petroleum University, China

Aiming at the phenomenon of the waterflooding breakthrough in the Khasib reservoir of AHDEB oilfield in Iraq, this paper studies the Khasib reservoir evolution and genesis of the abnormal high permeability zone. Results indicate that the karst reservoir of Khasib forming is controlled by the depositional karst and multiple phase deep buried karst. The reservoir evolution can be divided into three stages: Syndiagenetic stage, shallow-medium burial of organic acid dissolution stage, and rapid settlement of deep burial period of hydrocarbon filling stage. The depositional karst is featured as the fabric selective dissolution of vertical infiltration, which forms the two high porosity zones. During the buried diagenesis stage, the reservoir is through the buried karst that inherited karstification in non-fabric selective dissolution way based on the post-depositional pore, and featured as the strike-slip fault as the fluid migration path, the acidizing fluid from organic substance degradation as the dissolution media, the post-depositional high porosity zone as the dissolution carrier. After the depositional karst and least two stages deep buried karst, formed the two "abnormal high perm zones" that are intraclast grainstone zone of Kh2-1-2 and the algal debris packstone zone of Kh2-3-2. The intraclast grainstone zone is fluid flow passage to cause the early water breakthrough in water-flooding. In summary, high connectivity origin intraclast intergranular pore, the pore integrity was conserved during the depositional karst period, long-term shallow buried diagenetic environment, favorable potential area for fluid migration, good coupling relationship of the hydrocarbon fluid filling and fast formation burying period, which make the Kh2-1-2 zone forming the abnormal permeability zone.

157762166@qq.com**Influences of depositional environment on reservoir space of coal in Hegang coalfield****Wang Youzhi**

Institute of Daqing Oilfield Company Ltd., China

The aim of this paper is to discuss pore system dominated by depositional environment. To achieve this task, we focus on pore characteristics and coal-forming environment of coal in Chengzihe Formation of Hegang coalfield and analyse internal relation between them, using a series of techniques, including scan electron microscope, energy spectrum, low temperature nitrogen adsorption method, cluster analysis. The result shows that the micropore is richly developed, but there are some differences in pore structure. We found four pore models in Hegang coalfield based mainly on difference. The pore morphology is increasing from model I to model IV. The open grade and scale of fissure is also increasing with increasing fissure type. It must be pointed out that the adsorption capacity of pore is enhanced, but the difficulty of desorption capacity is also increasing from model I to model IV. Notably, the study on coal facies of main coal-forming period in Hegang coalfield reveal that the water is deepening and the falling speed is accelerating from south to north. The thick and stable of coal in north are better than south when there is fan-delta. A point that we want to stress here is that pore structure and crack would be controlled by depositional environment. The phenomenon of ash is increasing, pore system is complicated, numbers and types of cracks are diversified from south to north. Based on all research cores, we conclude that reservoir space of north is more complex than south, porosity and permeability of south are stronger than north.

83520447@qq.com