Petrology and diagenesis of the low permeable reservoir rocks from the Paleogene Shahejie Formation in central Bonan Oil Field, Shandong

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Abstract: The Petrology and diagenesis of the low permeable reservoirs from the Paleogene Shahejie Formation in central Bonan Oil Field, Shandong are examined on the basis of drilling cores, thin sections, microprobe analysis, scanning electron microscopy, cathodoluminescence and X-ray diffraction analysis. The reservoir rocks consist mostly of lithic arkose. The dissolution is believed to be a dominantly constructive diagenesis, whereas the compaction, filling and cementation of authigenic minerals are considered as a dominantly destructive diagenesis. The diagenesis may be ascribed to the A substage of the late diagenetic stages. The highly dissolution during the late diagenetic stages was responsible for the formation of the higher porosity of the reservoir rocks. The genetic mechanisms of the low porosity of the reservoir rocks include the compaction, filling and cementation of authigenic minerals during the late diagenetic stages. The isolated and disconnected interparticle porosities caused by the dissolution permitted the low permeable microthroats to be developed. The good porosity associations consist of interparticle porosity-primary interparticle porosity-intraparticle cracks. The distribution of the favourable reservoir rocks tends to be governed by sandstone distribution, structural arrangement and diagenesis.

Key words: Paleogene; Shahejie Formation; low permeability; diagenesis; reservoir rocks; Bonan Oil Field

资料简介

云南西盟-勐阿锡金矿评价预查地质报告

行政区域:云南省思茅地区西盟县、孟连县
完成单位:云南省地调院第五地质矿产调查所
内容简介:评价区野外工作分两个阶段进行。第一阶段主要进行路线穿越大理岩分布区综合地质调查,寻找大理岩型(完冷型)锡矿,兼顾其它类型。第二阶段对新发现力梭 V_1、V_2 矿体、莫窝 V_1 矿体进行地表工程控制,对南下戛 1∶5 万 Sn-28 土壤测量(兼作坡系重砂测量)全面收集区内地质、物化探资料,进行了综合研究。对力梭、莫窝矿区地质构造、岩浆岩分布、区内水工环地质进行了初步了解。提交了力梭、莫窝锡矿两处新发现的矿产地:锡资源量(333 + 334) 41001.79 吨,其中(333) 1143 吨。并对区域锡资源潜力进行了评价。

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