

is essentially conformable to that of the bituminous sandstone gravels in Early Devonian subterranean stream sediments. Since the diagenetic sequence of the gravels had reached the process of pyritization stage, the compaction-pyritization should have happened prior to the subterranean stream sedimentation, i. e. in late Silurian. The oil emplacement, as a stage of the above processes, was bound to happen in Silurian. The quartz overgrowth indicates that the buried depth of the sandstones before the oil emplacement was about 2,200-2,600m which is much deeper than that of oil generation threshold. This means that clay rock had entered the hydrocarbon generation environment during Silurian period. The lenticular or thin bedded bituminous sandstones of the 3rd member of the Wongxiang Group are surrounded by clay rocks, there isn't any passage like fault or crack to connect the sandstones with underlying Cambrian source rocks, a rational explanation of the oil in these sandstones could only be originated from the surrounding clay rocks. Thus the oil source of the 2nd member of the Wongxiang Group is also in Silurian rocks but not Cambrian rocks because their oil emplacement are in conformity with that of the 3rd member of the Wongxiang Group.

一种绘制地层柱状剖面图的软件

一种专为 PC—1500 型袖珍计算机配置的绘制实测地层柱状剖面图和综合地层柱状剖面图的专用软件“BM”，已由地质矿产部石油地质综合大队潘绍泰和吴尊喜两同志研制成功，并由该队学术委员会通过了技术鉴定。

“BM”软件可以绘制 1 厘米、1.5 厘米和 2 厘米宽三种规格的柱状剖面图，它可以绘制 99 种沉积岩花纹和 33 种主要岩浆岩和变质岩花纹、11 种接触关系，每种岩性又分为厚层、薄层、普通层和夸大层，可满足绘制地层柱状剖面图的各种地质要求。所有花纹均按地矿部规定的统一图例设计。所绘制的柱状剖面图的精度为 0.2 毫米，线条精确、清晰、美观，并具有存贮和复制功能。

“BM”采用模块组合式，具有可扩展性，系统可允许扩展为 700 余种岩性。岩性花纹代码按岩性分类编号，便于记忆。“BM”有自动检错功能，当用户使用不慎，按错键时，机器拒绝执行，并通知你输入正确的指令，方可运行。

“BM”设计有各种情况的地层厚度计算程序，用户只要根据程序的要求输入实测数据：测线长度、剖面方向和地层倾向间的夹角、地层倾角、地形坡度角和岩性花纹代码等，计算机即能自动绘制出该段地层的柱状剖面图。同时，输入的原始数据都存贮在计算机内或磁带上，可用这些数据逐个检查、修改、删插，保证原始资料的正确、可靠。

该程序使用方便、简单，半个小时就可以学会操作。经试用，比手工操作可提高工效十多倍。

该成果曾于今年 5 月在北京举行的首次全国技术成果交易会上展出。

(王本善)