

Coal facies and depositional environments of the Aurora and Cabeza de Vaca Units, Peñarroya-Belmez-Espiel Coalfield (Cordoba, Spain).

MARQUES, M., Departamento e Centro de Geologia, Faculdade de Ciências, Universidade do Porto, Porto, Portugal.

The Peñarroya-Belmez-Espiel Basin (Cordoba, Spain) is a narrow strip, 1 km wide and 50 km long, parallel to the precambrian and lower palaeozoic structures of Central Iberian and Ossa-Morena zones. The strip corresponds to an intramontane basin infilled with late Westphalian A to early Westphalian B continental sediments. From NW to SE, four successive sedimentary events were defined.

Coals from the Peñarroya-Belmez-Espiel Basin vary widely in terms of rank, ranging from Ortho-Bituminous in the central-eastern sector of the basin, to Ortho-Anthraxes in the western sector.

The Aurora and Cabeza de Vaca Units, situated in central-eastern sector, correspond to the third major sedimentary event, mainly represented by fluvial and lacustrine sequences including several coal-bearing units.

The characterisation of coals was obtained by the combined study of macerals and microlithotypes using as distinction criteria the relative proportion of carbominerites and minerite, the proportion and nature of liptinite and inertinite, and the relative abundance of desmocollinite and vitrodetrinite, the latter when compared with the proportions of microlithotypes in which they occur more frequently (clarite and trimacerite).

For each coal-bearing unit, roof to floor variations in petrographic composition as well as lateral variations for each coal seam are presented. The coal facies are defined on the basis of the association of macerals and microlithotypes, and the corresponding coal depositional environments are discussed.