currents. This implies that spiny Lower Devonian plants may represent a special adaptation to frequently (or seasonally ?) flooded river sides and banks. If this suggestion is correct, the relative abundance of spiny plants can reflect a repeatedly high energy paleoenvironment in a fluvial/deltaic system.

ABOUT THE USE OF GIS FOR GEOLOGICAL PURPOSES

I. HALLEUX[1]

ABSTRACT.- The geologist has to solve spatially distributed problems (logs description, cross-section, correlation, ore estimation, etc.), and thus requires elaborate software possibilities. He needs topological and attribute databases, for an accurate digital description of the data, but also procedures and techniques for data management and spatial analysis as well as elaborate display facilities.

The database structure, beyond the usual functionalities of structure flexibility, friendly coding, correcting and editing, etc. must be 3D architectured and must offer large text facilities. Besides algorithms for data classification and selection, networking and overlay, the system has to be able to integrate soft information, to take into account the spatial reference (through geostatistics, for instance) and to propose typical geological procedures (stereographic projections, fence-diagrams, 3D models, ...).

Using Geographic Information Systems (GIS) for geological purposes is a realist solution. The young and expanding market offers global and dedicated versions, running on PC or workstations. However, for very pointed problems like the geological ones, a unique solution is uncommon, even non-existant. The softwares are fortunately open and the geologist, through the combination of well choosen programs, can find directly and fully operational systems.

At the Natural Resources Department of INIEX, GIS are commonly used for practical purposes. The example of an actual research will be given, which show the interest but also the software requirements of GIS; it concerns the thematic mapping of the exploitation potentialities of the «Petit Granit» in Belgium.

1. Natural Resources Department - INIEX, rue du Chéra, 200, B-4000 Liège

STRIKE SLIP DEFORMATION IN THE STAVELOT MASSIF

F. GEUKENS[1]

ABSTRACT.- The Stavelot Massif can be divided into a northern part with a NE-SW (hercynian) direction and a southern part characterised by a E-W (caledonian) tectonic style.

These two parts are separated by a left hand (N50-60°E) strike slip fault system just south to the Malmedy Graben.

The movements along this fault system can be seen in the tectonic structure of the southern part, viz: a window structure at Falize-Ligneuville, a very complicated structure at Trois Ponts, and the typical bending of the dipping Rv5 anticline at He de Hierlot.

This strike slip fault may also be responsible for the extension of the Lower Devonian near Jevigné.

The north east prolongation of this strike slip fault passes through the seismic centre of Robertville.

1. K.U. Leuven, Afdeling Historische Geologie, Redingenstraat, 16, 3000 Leuven.

RECENT CONTRIBUTION TO TEPHROSTRATIGRAPHY BETWEEN THE EIFEL AND THE FRENCH MASSIF CENTRAL

E. JUVIGNE[1]

ABSTRACT.- Using microprobe analyses of minerals, creteria have been established for the identification of tephras which occur in Middle and High Belgium, and also in the Vosges/France: the Laacher See Tephra (11.000BP), the Eltville Tephra (16.000BP), and the Rocourt Tephra (between 62.000 and 106.000BP).

1. Chercheur qualifié du F.N.R.S., Laboratoire de Géomorphologie et de Géologie du Quaternaire, Place du XX Août, B-4000 Liège.