CHAPTER I
INTRODUCTION

CHAPTER I
INTRODUCTION

1.1. GENERAL STATEMENT

High strain shear zones classify the Eastern Desert of Egypt into: Northern Eastern Desert (NED), Central Eastern Desert (CED) and Southern Eastern Desert (SED). These structures play a significant role in the structural shaping and tectonic history of the Neoproterozoic rock grain dominated in the South Eastern Desert. Gabal Gerf area lies just north of the intersection of the Hamisana Shear Zone with the Allaqi-Heiani Shear Zone (Suture ?), and about 60-70 km east of Gabgaba and Aswan Terrains (Fig.1.1). It is covered almost entirely by an ultramafic nappe complex, representing the largest one not only in the Eastern Desert of Egypt but also among those observed in the Nubian Shield at all. For these, and many other reasons, this area was selected to be the main point of the present thesis, aiming at defining the tectonic history of a particular part in the basement succession of Egypt. This will contribute to the equivocal tectonic setting of the Neoproterozoic rocks and can unravel the deformational and kinematic history along the previously mentioned shear zones or sutures.

1.2. LOCATION AND ACCESSIBILITY

Gabal Gerf area lies in the extreme South Eastern Desert of Egypt. It is delineated between latitudes 22° 29˝ - 22˚ 46˝ N, and longitudes 34° 58˝ - 35° 25˝ E (Fig.1.2). The absence of the asphaltic roads and lacking of motors tracks make it difficult to reach this area. However, the area could be reached through the Shalatein-Halayib main road, then through 80 km desert track to the soı thwest, following by a tributary of Wadi Shab to

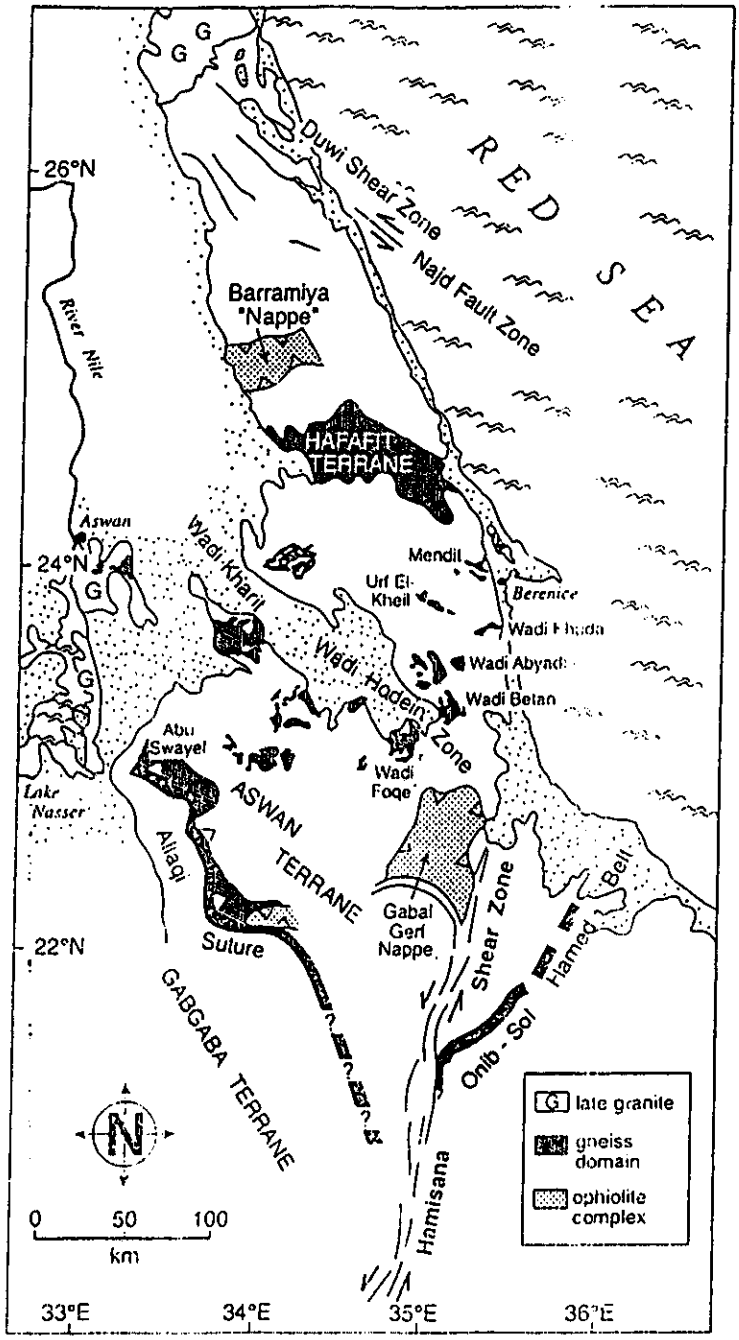

FIGURE (1.1): Tectonic sketch map of the central part of the Nubian Shield in NE Africa showing the possible sutures within the Pan –African domain (after Kröner et al., 1987; Greiling et al.,1994).