CHAPTER ONE
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I.1. General Statement

The increasing demand for uranium for major peaceful uses and the strategic nature of such material pushed the Nuclear Materials Authority (NMA) to continue keen exploration activities to increase the national potential of this material. The exploration activities led to the discovery of many radioactive anomalies and uranium mineralization prospects. Most of these occurrences are related to the granites .

Gabal (G.) Qattar uranium prospect has attracted great attention, since its first discovery, twenty years ago. More than ten uranium occurrences have been discovered in this prospect. In chronological order of discovery, these occurrences are named : G-I , G-II, G-III , G-IV, G-V, ...etc (Fig . 1.1).

G-II uranium occurrence is one of the most important and promising occurrence in G. Qattar prospect. Thus, this occurrence has been chosen, as having the greatest potentiality, for further detailed surface and subsurface investigations .

I.2. Synopsis of the Egyptian Basement Rocks

The Egyptian basement rocks constitute the northwestern tip of the Arabian – Nubian shield that represents the northern part of the U-shaped Pan-African orogenic belt of East Africa (Engel et al., 1980) (Fig .2.1). These rocks occupy about one tenth of the land surface of Egypt. They are forming the mountainous masses in the Eastern Desert, Sinai and small isolated outcrops to the southwest of the Western Desert.