

Contents

Abstract.....	I
List of figures.....	II
Chapter 1: Introduction.....	1
1.1. Location and accessibility.....	1
1.2. Topography and drainage.....	1
1.3. Aim of the work.....	2
1.4. Methodology.....	2
1.5. Previous work.....	5
Chapter 2: Stratigraphy.....	12
2.1. Introduction.....	12
2.2. Stratigraphic position of the study area.....	15
2.2.1. The Cretaceous System.....	15
2.2.1.1. The Lower Cretaceous Malha Formation (Aptian-Albian).....	20
2.2.1.2. The Upper Cretaceous Halal Formation (Cenomanian).....	24
2.2.1.3. The Upper Cretaceous Maghra El Hadida Formation (Turonian).....	29
2.2.2. Shabrawet group (Upper Cretaceous- Upper Eocene).....	32
2.2.3. The Eocene system.....	40
2.2.3.1. The Middle Eocene (Late Lutetian) Gabal Hof Formation.....	40
2.2.3.2. The Middle Eocene (Bartonian) Observatory Formation.....	41
2.2.3.3. The Upper Eocene (Priabonian) Wadi Hof Formation.....	49
2.2.4. The Oligocene system.....	53
2.2.4.1. Foreword.....	53
2.2.4.2. The Oligocene Gabal Ahmar Formation.....	58
2.2.5. The Miocene system.....	60
2.2.6. The Pliocene-Pleistocene deposits.....	66
Chapter 3: Structural Setting.....	70
3.1 Introduction.....	70
3.2 Folds.....	71
3.2.1 ENE-WSW folds.....	71
3.2.2 Folds associated with NW-SE faults.....	79
3.3 Faults.....	80
3.3.1 The ENE-WSW trending Faults.....	80
3.3.2 The NW-SE trending Faults.....	90
3.4 Unconformities.....	93
3.5 Structural analysis and interpretation.....	94
3.5.1 Northern Egypt structural setting and Syrian Arc system.....	94
3.5.2 Shabrawet fold belt.....	104
3.5.3 Fault analysis and interpretation.....	106
3.5.4 Folds parallel with NW oriented faults.....	113
3.6. Tectonic Evolution.....	116
3.6.1. Deformation phases.....	116

3.6.1.1. D1 deformation.....	116
3.6.1.2. D2 deformation.....	116
3.6.1.3. D3 deformation.....	117
3.6.2. Time of structural deformations.....	117
3.6.3. Tectonic history of the study area.....	118
Chapter 4: Summary and conclusions.....	124
References.....	128
Arabic summary	