

# **Wadi El-Farigh Depression in the Western Desert –Egypt Study in Applied Geomorphological**

## **Abstract**

Wadi El–Farigh Depression Located in the Northern East of the Western Desert between Latitudes  $30^{\circ} 2'$  and  $30^{\circ} 20'$  North and Longitudes  $30^{\circ} 9'$  and  $30^{\circ} 41'$  East , the area of depression covers about  $826 \text{ K m}^2$  .

Thesis Consist of Five Chapters Preceded by an Introduction and followed by a Conclusion . The Introduction explains the Plan of the Study , identifies the Study area , the justifications of Selecting the study area , the aims of the Study and Finally its Procedures . the Conclusion Presents the study Findings .

The First Chapter studies the Physical Geographical Characteristics of Wadi El–Farigh Depression , including the Geological aspects , the Relief Features , Climatic Conditions , Soils and Groundwater Characteristics .

The Second Chapter Deals Slopes analysis of Wadi El–Farigh Depression , including Geographical Distribution for Slope Profiles , analysis of Slops angles , Curvature, Aspects and slope Forms . Gentle Slops of less than nine degrees representing 83,1% of the Total Slope Lengths . The Concavity is a very Characteristic Feature of the Studies Slopes representing 50,4 % of the Total Lengths Whereas Convexity represents 26,7 % . About 32.7% from surfaces of Depression gradient to Northwest and Northeast . The Convex-Concave Slopes are the most common in the Depression .

Chapter three discusses the morphometric analysis of drainage basins and its Networks in Wadi El–Farigh Depression . this Chapter Showed that drainage basins and its networks Played an important role in the morphology of the Depression . The drainage Patterns are the Final Result to interaction between Geologic Setting and Climatic Conditions , these patterns are dendritic pattern , centeripetal pattern , braided pattern , parallel pattern and radical pattern .

Chapter Four Studies the Geomorphological map of Wadi El–Farigh Depression . It Studies Structural Landforms such as cussetas and structural platforms . the Chapter also Traces Erosional and depositional landforms such as wadis , rills , pediments , wadi terraces , alluvial fans , and sand forms .

Chapter Five discusses the Applied Geomorphology for the Depression and the Possibility of general development in the Future . this Chapter studies the following Point : agricultural , expansion , irrigation Problems , the Future development of new Settlements , mining and industrial activities , development of the animals and fish wealth , generating electricity from wind and the solar power . Finally , the Study Paid attention to the Possibility of developing the transport network , tourism , social services and its role in developing of Wadi El–Farigh Depression .