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(95)

# Morphotectonic of Mushora-Dagh Structure North Western of Iraq Using Remote Sensing and Field Data

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## ABSTRACT

A detaild morphotectonic study has been carried out for the Mushora Dagh Anticline. This anticline is situated to the northwestern part of Iraq about (95) km from Mosul City. The morphotectonic map deduced from the enhanced space imagery showing the existence of seven morphotectonic units, differences in their lithologic and morphologic characteristics, which has been affected by local and regional tectonic movements.

The morphotectonical analysis method included: first, study of directional analysis of structural lineaments and relation between their direction and the tectonic movements through the successive geological periods. Furthermore, upward concavity of the longitudinal profiles represents evidence of the appearance of some anomalies that can be attributed to a number of geologic and tectonical factors. Finally, three high anomaly values appeared while determining the index sinuosity of the Tigris River. These values agree with the first appearance of the surfaces of the transverse and longitudinal faults of Mushora-Dagh Anticline and the axis of this anticline.

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Lillesand and Kiefer, )

.(1987

(95)

(42° 33' 34'') (42° 19' 20'')

.( ) (37° 02' 10'') (36° 50' 57'')

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(574)

(Taufic and Domas, 1977)

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(Taufic and Domas, 1977)

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1

( AV )

(19)

:( )

2

( EU/JE )

(70)

:( )

3

(289)

.( B,A1 )

E&F,D )

(Marker Horizon)

(C) .(

50

:( )

4

( Ing )

(130)

...

:( ) 5

( QFP )

Buday and )

- (Jassim, 1987

(Unstable Shelf) (Foot Hill Zone)

(25)

(7)

(574)

(5)

(21)

(1:250,000) 1992/ /14

(Thematic Mapper) (34 170 )

(Landsat 5)

:

(7,4,1)

(False Color)

1

.(Tahir, 2000)

Non Linear )

2

(Histogram Equalization)

(Stretch

(Contrast Ratio)

.(Structural Features)

High Pass )

(2 )

( )

(Filter

( )

./ /

(1:250,000)

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(Zuidam and Zuidam, 1979)

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**:(Central Zone Unit)**

**- 1**

**:(Central Erosional Unit)**

**- 2**

**:(Erosional Foot Hill Unit)**

**- 3**

**:(Accumulation Foot Hill Unit)**

**- 4**

**:(Tigris River Terraces Unit)**

**- 5**

**:(Flood Plain Unit) - 6**

**:(Tigris River Course Unit) - 7**

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Sinuosity ) (Lineaments)  
 (Long Profiles)  
 : (Index  
 : **1**

(Rachna et al., 1999)

.(4 )

Rose ) (Diagram  
 (17.9%) (50-40) (24.3%)  
 - (40-30) (13.3%) -  
 - -

.(Numan and Bakose, 1997)

: **2**

.(1998 )

( J-38-S\NW)

(88\450) (88\440) (88\430) (88\420) (87\440)

(1:100,000)

.(1:20,000)

Knick )

(Points

.(Lee and Henson,1978)

.( ) (Microsoft Exail)

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(470) (2.5) (1.92)

. (485) (6.25) (4.16)

( ) ( ) :

(Cliff)

(Fault Scarp)

( )

( )

: 3

( Adams, 1980) (Al-Daghastani and Campbell, 1995)

(6 )

(2.907)

(2.357)

(2.174)

(Slope)

(Schumm, 1977)

(6)



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