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(٢٠٠٩/٤/١٦ ، ٢٠٠٨/٥/٥)

TM1, TM4, TM7,

(7)

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The Application of Color Composite Image in Detecting and Delineation Difference Reflection of Gypsum in Surface Soil of Al-Jazeera Area in Nineveh Governorate \ Iraq

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ABSTRACT

This work represents an attempt to recognize and delineate the area of different reflection of gypsum in the surface soil of Al- Jazeera region in the Ninevah Governorate, depending on the variations in the spectral reflectance of the gypsum and other landform

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features in the study area. This investigation utilized the three bands (TM1, TM4 and TM7) of the Landsat7 immerging together by using the ERDAS program to produce single color composite image, including the use of three primary colors (Red ,Green and Blue) respectively. Given these conditions, the basic principles of visual interpretation of images are all that is required of interpreter to implement them by using the color theory and the available field references about the area. The present study concluded the presence of three different levels of gypsum in the top soil surface of the Al- Jazeera North Western Iraq. which are recognized in the color composite image. These results are confirmed by both field visits and laboratory analysis of soil sample.

(Gypsum $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$)

(2002)

%25

(2006)

(Soheila *et al.*, 2007)

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.(Wikipedia, 2006)

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// (ETM) ()

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TM1

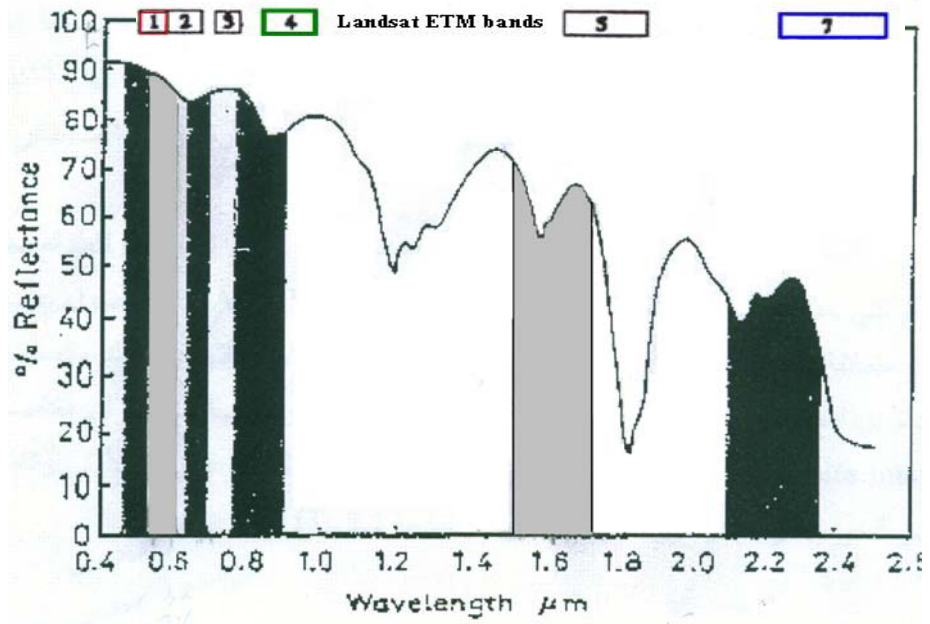
TM7

TM1

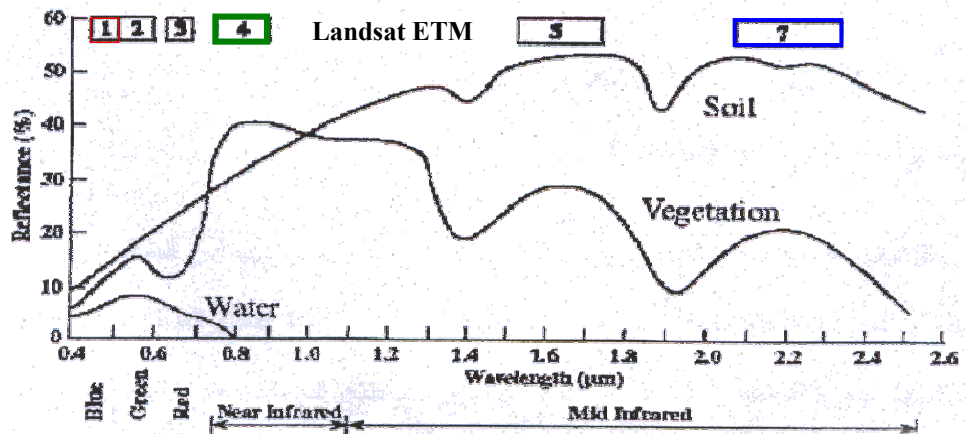
.TM7

TM4

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.(Whitney *et al.*, 1983)



.(Richards and Jia, 1999)

TM7, TM4, TM1

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(Arc View 3.3)

(ERDAS)

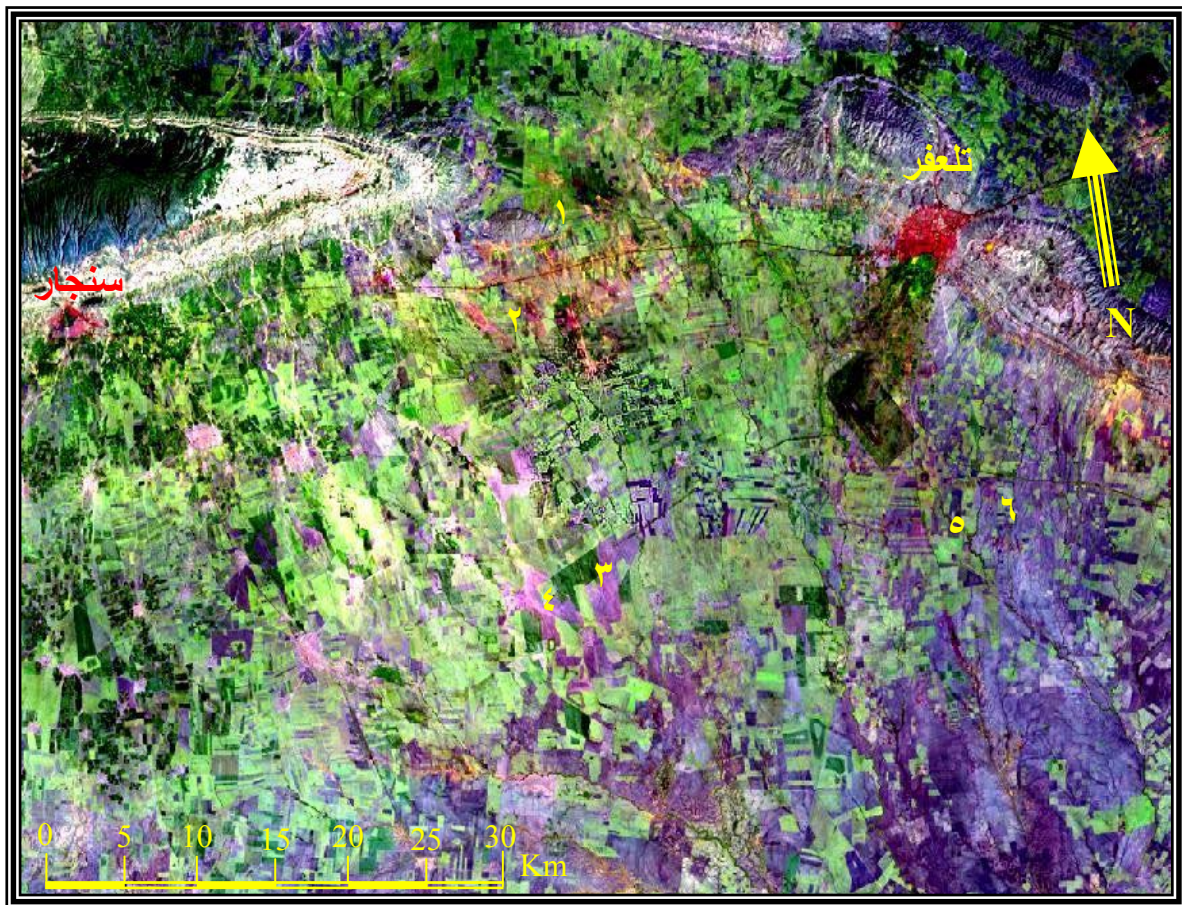
(False color composite image)

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.(Taher, 1991)



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(TM2, TM3, TM4)

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Texture	%		
Silt Loam	65.24	(-) ()	
Sandy Loam	73.45	(-) ()	
Loam	41.78	()	
Silt Loam	48.67	()	
Clay Loam	0.527	()	
Siltyclay Loam	0.25	()	

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.(Lillesand and Keifer, 1987)

.() (2004)

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TM2, TM3, TM4

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