

## **Eliminating the Influence of Caprock Thickness on Anomaly Intensities in Geochemical Surface Survey in the South Slope of the Dongying Depression in East China**

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### **Abstract**

In geochemical surface surveys, anomalies are used to predict oil/gas fields. However, it was revealed that caprock thickness strongly influences anomaly intensities where caprock thickness varies intensely. In this paper, we established a method to eliminate this influence by using wavelet analysis. In the south slope of the Dongying Depression in east China, there are no anomalies over several oil fields (undeveloped) all the same, even if surface interference was eliminated. After we processed the data with this method, the corrected anomalies coincide with oil fields (wells), traps and sand-bodies. This study illustrates that the influence of caprock thickness on anomaly intensities may result in unreliable prediction where caprock thickness varies intensely but it can be eliminated by using wavelet analysis.