

## INTISARI

### **Analisis Bidang Gelincir dan Lapisan Lapuk untuk Mengidentifikasi Tipe Longsor di Desa Clapar Kabupaten Banjarnegara dengan Menggunakan Metode Geolistrik Resistivitas 2D**

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Telah dilakukan penelitian sebagai upaya mitigasi pada area yang rawan terhadap bencana longsor. Penelitian ini dilakukan dengan menganalisis bidang gelincir dan lapisan lapuk untuk mengidentifikasi tipe longsor. Penelitian ini dilakukan di Desa Clapar, Kecamatan Madukara, Kabupaten Banjarnegara pada tanggal 7 – 14 Februari 2017 di dua lokasi. Lokasi pertama berada pada lereng perbukitan di sebelah barat pemukiman dan lokasi kedua berada di sebelah timur pemukiman.

Penelitian ini menggunakan metode geolistrik resistivitas dengan konfigurasi dipole-dipole dan konfigurasi *schlumberger*. Pada lokasi pertama dilakukan penelitian dengan konfigurasi dipole-dipole sebanyak dua lintasan dan konfigurasi *schlumberger* sebanyak dua titik pengukuran. Sedangkan, pada lokasi kedua dilakukan penelitian dengan konfigurasi dipole-dipole sebanyak tiga lintasan dan konfigurasi *schlumberger* sebanyak tiga titik pengukuran.

Hasil penelitian menunjukkan lokasi pertama mempunyai model bidang gelincir yang berbentuk lurus dengan sudut kemiringan  $15^{\circ} - 40^{\circ}$ , dan ketebalan lapisan lapuk sebesar 4,5 – 15,0 meter. Sedangkan pada lokasi kedua mempunyai bidang bidang gelincir sebesar 1,32 – 14,38 m dengan model berbentuk lurus dengan sudut kemiringan  $5^{\circ} - 20^{\circ}$ , dan ketebalan lapisan lapuk sebesar 1,5 – 7,0 meter. Hasil interpretasi menunjukkan bahwa bidang gelincir berupa lempung dan lapisan lapuk berupa tanah sampai pasir lempungan. Hasil penelitian mengidentifikasi tipe longsor pada daerah penelitian yaitu longsor translasi, rayapan dan aliran tanah.

*Kata kunci : longsor, bidang gelincir, lapisan lapuk, resistivitas*

## ABSTRACT

*Slip Surface and Weathered Layer Analysis to Identify  
The Landslide Type in Clapar Village Banjarnegara Regency  
by Using 2D Geoelectrical Resistivity Method*

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*A research had been conducted as a mitigation effort in landslide prone area. The research was conducted by analyzing slip surface and weathered layer to identify the landslide type. The research was conducted in Clapar Village, Madukara District, Banjarnegara Regency from 7<sup>th</sup> to 14<sup>th</sup> February 2017 in two locations. The first area was located in the slope of the hill, in the west side of the residential areas and the second one was located in the east side.*

*The research using geoelectrical resistivity method by dipole-dipole and schlumberger arrays. Research in the first area was conducted by two lines of dipole-dipole array and two points of schlumberger array. While research in the second area was conducted by three lines of dipole-dipole array and three points of schlumberger array.*

*The research result showed that the slip surface resistivity in the first area ranged from 2.93 to 47.43  $\Omega$ m and has a flat model with a slope angle about 15-40°, the weathered layer resistivity was ranged from 70.59 to 515.75  $\Omega$ m with 4.5-15.0 meters in thickness. While in the second area, the slip surface resistivity was ranged from 1.32 to 14.38  $\Omega$ m and has a flat model with a slope angle about 5-20°, the weathered layer resistivity was ranged from 21.41 to 70.59  $\Omega$ m with 1.5-7.0 meters in thickness. The interpretation result showed that the slip surface was clay and the weathered layer was soil and sandy clay. The research result identify the landslide types in the area are translational slides, soil creeps and earthflows.*

*Key words : landslide, slip surface, weathered layer, resistivity*