

Methods

The tomographic images are obtained by using the RES2DINV inversion package for determining the L1-norm resistivity models based on the raw resistivity measurements (Loke et al., 2003). The horizontal node spacing of the resistivity models is 50 m, whereas the vertical spacing is ~20 m (nodes located at 17.1, 34.2, 53.0, 73.7 and 96.4 m below the surface).

Reference

Loke, M.H., Acworth, I., and Dahlin, T., 2003, A comparison of smooth and blocky inversion methods in 2-D electrical imaging surveys: *Exploration Geophysics*, v. 34, p. 182–187, doi: 10.1071/EG03182.

Table DR1. Start and end points of resistivity profiles (locations of the current electrode closest to the voltage electrodes of dipole-dipole configuration)

Profile	Start point (long)	Start point (lat)	End point (long)	End point (lat)
A1	-53.0013	-16.8279	-53.0016	-16.8310
A2	-53.0008	-16.8274	-53.0034	-16.8293
B1	-53.0064	-16.8147	-53.0145	-16.8146
B2	-53.0010	-16.8073	-53.0039	-16.8067
B3	-53.0010	-16.8073	-53.0015	-16.8047

Resistivity modeling

The convergence to the final resistivity models is rapid (3 to 6 iterations), and the errors (rms residuals) of the resistivity models are low (3.2–8.7%), particularly given the complexity of the subsurface resistivity structures (Table DR2).

Table DR2. Number of iterations and errors of the final resistivity models

Profile	Number of iterations	Error (%)
A1	4	7.7
A2	3	8.1
B1	5	8.7
B2	4	5.4
B3	6	3.2

Gravity data processing

Bouguer (2670 kg/m^3) and terrain corrections have been applied. 1967 International Gravity formula is used in the calculation of latitude-dependent theoretical gravity. Altitude and location of measurement points were obtained by differential GPS. All data are tied to the Brazilian Gravimetric Network by a local reference gravity station at Ponte Branca, Mato Grosso.



Figure DR1. A. Meter-scale impact melt rock of sedimentary origin with internal flow texture observed near Profile B3 (Fig. 3 in the main text); B. Polished sample from the outcrop in A showing centimetre-scale flow banding. Flow lines are defined by glassy (white bands) alternating with cryptocrystalline quartz-rich bands (pink bands). Similar melt lumps were also documented in Engelhardt et al. (1992).