

## **MICROGRAVITY SURVEYS ON THE NULLARBOR**

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A series of 15 microgravity surveys were undertaken by the Geological Survey of South Australia to determine if cavities existed underground in specific locations on the Nullarbor Plain, South Australia. Survey spacing ranged from 10 metres to 20 metres in a regular grid pattern. The grids were 200 metres by 200 metres in size, with additional traverses extending from the centre of each grid in the cardinal directions, the total lengths of these lines being 600 metres.

An additional survey undertaken over the Koonalda Sinkhole exhibited a 1.2mGal magnitude anomaly. The remaining sites exhibited a range of magnitudes, peaking at approximately 0.5mGal. The gravity images display areas of high and low density suggesting variation in the density of the limestone consistent with possible cavities.

The microgravity results have been used to aid a scientific drilling programme in the area. The position of the drill rig was moved to areas exhibiting high gravity to reduce the chances of the drilling intersecting caves, and to reduce the chances of heavy trucks potentially breaking the surface and falling into a cavity.