Queensland Government

Department of Regional Development, Manufacturing and Water

# Aerial groundwater survey of the Condamine Alluvium

INFORMATION SHEET

The Office of Groundwater Impact Assessment (OGIA) will be conducting an airborne electromagnetic (AEM) survey of the western Condamine Alluvium, between Dalby and Cecil Plains, in early May 2023.

The helicopter survey is for the purpose of understanding groundwater connectivity. The survey will begin on Monday 8 May and take up to 10 days.

OGIA has commissioned SkyTEM Australia to complete the survey.

## How?

A helicopter will fly about 90 metres above the ground with a frame suspended about 35 metres above the ground. To achieve good coverage, it will take repeated passes, with flightpaths between 500m and 1km apart.

As it flies overhead, it will be sending an electromagnetic signal to the ground and recording the return signal. The strength of the signal is less than those created by everyday household appliances.

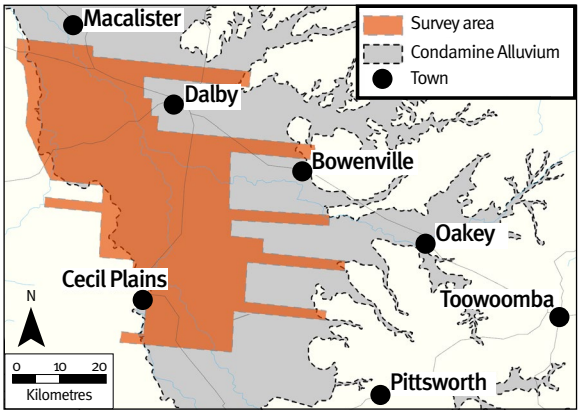
## Why?

The survey will help us understand the shallow geology and groundwater system. We are interested in learning more about the Horrane Fault, and the potential for connection between the Condamine Alluvium and the underlying coal seams. The survey is not looking for coal seam gas resources.

Previous surveys of the area have used seismic techniques which have focused on gathering information about deeper geology and have provided a good understanding of the extent of the fault in these deeper formations. AEM surveys have proven useful for imaging the near surface in other parts of the Surat Basin.

Much of the Condamine Alluvium lies above the Walloon Coal Measures, which are targeted for coal seam gas extraction along the western margins of the Condamine Alluvium. This survey work will help us understand how the depressurisation of coal seams caused by coal seam gas extraction could affect groundwater in the Condamine Alluvium.

**Figure 1: The planned survey area**



OGIA has been working since 2012 to improve understanding of groundwater connectivity in the Condamine Alluvium. This new information will also benefit landholders through an improved understanding of the groundwater resource.

## How may this impact you?

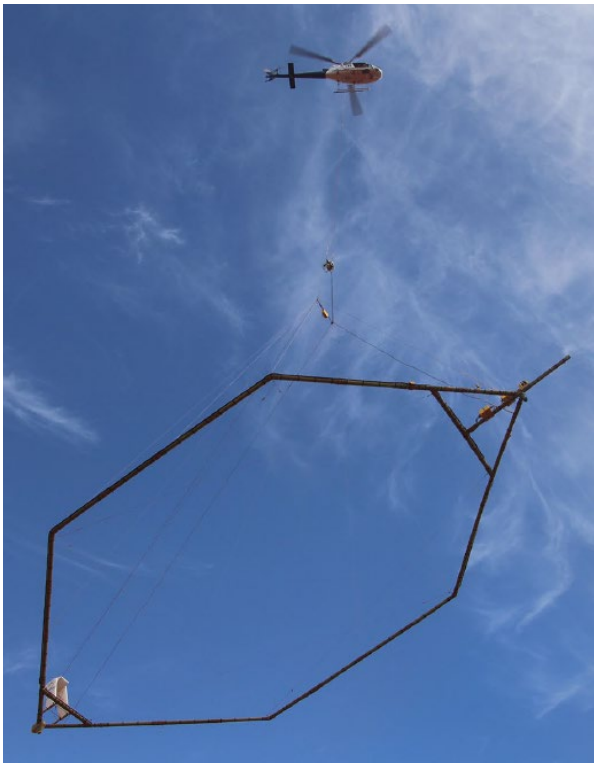
AEM surveys are carried out all over the world and are considered very safe. The strength of the electromagnetic signal is very weak – the field produced by a TV is more than 5 times stronger.

Previous surveys in other places have had zero to minimal effect on livestock. The helicopter may adjust flight lines to minimise flying directly over houses or stock intensive operations.

## Can I see the results?

Yes. OGIA and the Queensland Government will own this information and will make the findings available in an easy-to-access format in the near future.

The interpretation of this data is complex and time-consuming. To get a full picture, our scientists will need to consider other sources of data alongside this new information. Any improved understanding from this work will be made available to all in due course.



*The helicopter and frame, seen from below.*

## About SkyTEM Australia

SkyTEM Australia is a company specialising in AEM surveys with experience in the Surat Basin. SkyTEM has conducted similar surveys in the past for Geoscience Australia in other areas of the Surat Basin. During the work, SkyTEM will follow strict air safety protocols.

## About OGIA

OGIA is an independent office responsible for the cumulative assessment of groundwater impacts in areas of intensive resource development – including those around the Condamine Alluvium. The technical assessment and management arrangements are set out every three years in the Surat Underground Water Impact Report.

Scan the QR code below to read more about OGIA online.

**Further information**

Scan the QR code or go to www.business.qld.gov.au and search for: 'OGIA'

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