

Senate Standing Committee on Economics

ANSWERS TO QUESTIONS ON NOTICE

Resources, Energy and Tourism Portfolio

Budget Senate Estimates

1 June 2010

Question: BR6
Topic: Earthquakes and tremors in Tennant Creek area
Proof Hansard Page: E34-35

Senator Ludlam asked:

Senator LUDLAM-Can you provide us, within reason-so not every tiny little tremor-with an earthquake or tremor summary for the Tennant Creek area for the past 25 years or so? How difficult would that be to produce?

Dr Drummond-You would be able to do that by simply querying the earthquakes on our website by putting in a latitude-longitude range, and it would return to you all of the earthquakes that we have recorded and noted in our system.

Senator LUDLAM-All right, but the reason I am asking this is that recent data, at least, has not been returned to the website. So there have been a couple of moderately serious quakes in the area for which you do

not have the data up online.

Dr Drummond-It is possible that people would feel earthquakes but we would not record them.

Senator LUDLAM-I mean ones that made the news.

Dr Drummond-It is quite possible that people would feel them, and they would be reported in the news, but we would not record them on sufficient stations to be able to get an accurate location and magnitude. You need to record them on at least three to four stations to get an accurate location and magnitude.

Senator LUDLAM-So do we have to wait 12 months for that site to be redeveloped before I would be able to obtain the sorts of records that I am asking for?

Answer:

The term "Tennant Creek area" is not very specific, so a query was made of the Geoscience Australia database to list earthquakes within half a degree of latitude and longitude (approximately 55km) of Tennant Creek, and two degrees of latitude and longitude (220 km). See map at **Attachment A**.

The first earthquake recorded for the area was in 1984. Consequently, all earthquakes were considered to be within the context of “25 years or so”.

The database contains 1420 earthquakes within half a degree and 1458 within two degrees.

The 1458 earthquakes within two degrees are in **Attachment B**. The map in **Attachment A** shows the earthquake locations.

Most earthquakes lie to the southwest of Tennant Creek.

All earthquake positions have an error in their location depending on how well they were recorded by the seismograph network. Earthquakes greater than magnitude three have errors of nine kilometres or less. Smaller earthquakes have errors as large as 13 kilometres. Small earthquakes that occur during times when data are not available from the seismograph station at Tennant Creek may not be recorded in the database.