

1 **Supporting Information for “A Repeating**
2 **Earthquake Catalog from 2003 to 2018 for the**
3 **Raukumara Peninsula, Northern Hikurangi**
4 **Subduction Margin, New Zealand”**

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8 **Additional Supporting Information (Files uploaded separately)**

9 1. Caption for Dataset S1 and S2

10 **Introduction**

11 Dataset S1 contains a QuakeML file with information of all the earthquakes which are in
12 the final repeating earthquake catalog. Dataset S2 contains a summary for each of the
13 earthquakes in the final catalog.

14 **Dataset S1.**

15 QuakeML file containing all events in the final catalog. eventID's in this file match the
16 GeoNet eventID's so that the earthquakes can be correlated between catalogs and Dataset
17 S2.

18 **Dataset S2.**

19 CSV file containing a summary of the repeating earthquakes identified. Column one
20 provided a general number for the event. time is the time which the event occurred,
21 latitude is the relative location latitude of the event, longitude is the relative location
22 longitude of the event, depth is the relative location depth of the event. magnitude is
23 the calculate magnitude of the event. event_id is the GeoNet eventID that can be used
24 to relate events to the QuakeML file and the GeoNet catalog. horizontal_uncertainty is
25 the horizontal uncertainty from GrowClust in meters. local_magnitude is the calculated
26 local magnitude of the event. moment_magnitude is GeoNet's moment magnitude for the
27 event. magnitude_type is ML as local magnitudes were obtained. p_phase_count is the
28 P-phases used to obtain locations, s_phase_count is the S-phases used to obtain locations,
29 p_pick_count is the number of P-wave first arrivals that were identified, s_pick_count is the
30 number of S-wave first arrivals that were identified. used_phase_count is phases used by
31 GrowClust to constrain location. station_count is the number of stations used to obtain
32 a location. vertical_uncertainty is is the vertial uncertainty from GrowClust in meters.
33 stations is the GeoNet seismic stations that the manual picks were made at. family_id is
34 the identifier of the family. plate_loc is where the families are occurring, the Australian
35 Plate (aus), the Pacific Plate (pac), or along the interface (int).