

1a. Maunga Puia

- A1 **Barker S** et al. - The climatic and environmental impacts of New Zealand supereruptions
- A2 **Tapscott S** et al. - A Quantitative Investigation into Pyroclast Properties Across the Transitional Stratigraphy of the Taupo 232 CE Y4/Y5 Eruption Phases
- A3 **Corna L** et al. - Runout and hazard characteristics of pyroclastic density currents after encountering obstacles
- A4 **Watson L** & Cannata A - Tracking a pyroclastic density current with seismic signals at Mt. Etna (Italy)
- A5 **Schuler J** et al. - Changes in Seismic Velocity Accompanying Geodetically Detected Deformation at Taupō Volcano
- A6 **Hoult H** et al. - Growth of complex volcanic ash aggregates in the Tierra Blanca Joven eruption of Ilopango Caldera, El Salvador
- A7 **Clarke M** et al. - Hide and seek: Cryptotephra studies applied to a deep marine core
- A8 **Paredes-Mariño J** et al. - A tale of extreme fragmentation: the volcanic ash from Hunga Eruption
- A9 **Jarvis PA** et al. - Constraints on the Hunga Tonga-Hunga Ha'apai eruption processes from remote magnetic field measurements of volcanic lightning
- A10 **Rebecchi M** et al. - Mafic recharge in the lead-up to the world's youngest basaltic Plinian eruption: Ulawun volcano, Papua New Guinea
- A11 **Kilgour G** et al. - Quantifying ballistic ejecta in volcanic deposits: a case study of the 1886 Tarawera eruption
- A12 **Kilgour G** et al. - An overall assessment of volcanic unrest at Ruapehu in early 2022
- A13 **Li B** et al. - The most recent fissure feed and lava-producing eruptions of the Arxan-Chaihe Volcanic Field (ACVF), NE China
- A14 **Ruz-Ginouves J** et al. - Understanding flow localization using waxy fissures
- A15 Marshall AJ et al. (presented by **Kennedy B/Doll P**) - Flow Units of the Rangataua Lava Flows
- A16 **Doll P** et al. - Paleomagnetic constraints in Holocene lava flows eruption ages at Ruapehu, Aotearoa NZ
- A17 **Mazumdar A** & Turner G - Palaeomagnetic records of the Laschamp and Mono Lake geomagnetic excursions from Tongariro, New Zealand
- A18 **Poojary S** et al. - Using Palaeomagnetic Techniques to Uncover the History of an Archaeological Site in Napier/Ahuriri, Hawkes Bay
- A19 Reid H, Mead S & **Procter J** - Developing indicators of volcanic induced coastal aggradation from lahars using satellite remotely sensed imagery; A case study from the 2018 Ambae Eruption, Vanuatu.
- A20 **Overwater G** et al. - Extreme facies variation and pyroxene megacrysts: a magmatic to volcanic approach to unravel the emplacement mechanisms of the Te Onepoto flank system, Lyttelton Volcanic Complex.
- A21 **Zhang R** & Brenna M - Volcanology, geochemistry and age of Pigroot Hill Volcanic Complex, Waipiata Volcanic Field, New Zealand

1b. Igneous Petrology and Geochemistry

- A22 **Vicente J** et al. - Modelling outgassing through channelling in vulcanian eruption.
- A23 **Hamilton K** et al. - Insights into the 15 January 2022 Hunga eruption (Kingdom of Tonga) through non-juvenile pyroclasts
- A24 **Hughes E** et al. - Using a multi-volatile thermodynamic model to understand the effects of sulphur on silicate magmas
- A25 **Georgatou A** et al. - Petrogenesis of Brothers submarine volcano and associated hybrid seafloor massive sulfide deposit
- A26 **Prentice M** et al. - Silicic volcanism at the dawn of the TVZ: Trends in geochemistry, mineralogy and magma storage, of the Tauranga Volcanic Centre, New Zealand
- A27 **Baxter RJM** & Maclennan JC - Magma flux is primary control on distribution of stored magma along the slow-spreading Reykjanes Ridge

- A28 **Coulter R** et al. - H₂O and CO₂ contents of volcanic glass from the offshore TVZ-southern Havre Trough
- A29 **Gruender K** et al. - Deep magma sources feeding eruptions from Red Crater, Tongariro
- A30 **Swann JA** et al. - Mineral Recorders of Ascent Processes in Explosive Eruptions at Mt. Taranaki, NZ
- A31 **Stenning A** et al. - Refining the Early Geochronological Record for the Dunedin Volcano, New Zealand
- A32 **Wilson LJE** et al. - Characterisation of the anomalous sub-alkaline Maniototo Basalts in the alkaline Dunedin Volcanic Group; Sources and Mechanisms

1d. Seismotectonics

- A33 **Taylor-Offord S** et al. - GeoNet Sensor Network Capability; Estimates of Minimum Detectable Earthquake Magnitude in Aotearoa New Zealand
- A34 **Chamberlain CJ** et al. - A Repeating Earthquake Catalogue for New Zealand
- A35 **Buffett W** et al. - Investigating the lithospheric structure of New Zealand using S-to-P Receiver functions
- A36 **Williams J** et al. - Along-strike extent of ruptures on geometrically complex reverse faults; insights from paleoseismic investigations and physics-based earthquake simulations of the Nevis-Cardrona Fault system
- A37 **Coffey G** et al. - Slip Rate study of the Te Punga Fault, Hauraki Rift, New Zealand
- A38 **Muirhead J** - Mesozoic to Present Day Structural Fabric of the Auckland Region
- A39 **Mark O** et al. - Intermediate-Depth Earthquakes Beneath the Central Taupō Volcanic Zone: Where, Why and How?
- A40 **Van Wijk K** et al. - Seismic methods for three-dimensional imaging to depth of the crust under the Auckland Volcanic Field
- A41 **Tateiwa K** et al. - Seismicity and its implications for fluid movement in the northern and central Hikurangi subduction zone
- A42 **Chua TJ, Ellis S** et al. - Estimating fault rupture depths in the Wellington Region: constraints from laboratory experiments, seismic relocation of earthquake depths and thermal modelling
- A43 **Barnes P** et al. - Compactive deformation of incoming calcareous pelagic sediments, northern Hikurangi subduction margin, New Zealand: Implications for subduction processes
- A44 **Warren-Smith E** - Evidence for Spatially Heterogeneous Megathrust Fluid Valving in the Northern Hikurangi Subduction System
- A45 **Tagami A** et al. - Stress field in the northwestern part of the South Island, New Zealand, and its relationship with faults of recent earthquakes
- A46 **Kwong S** et al. - The PULSE Network: Building an Earthquake Catalogue to Understand SSE-Earthquake interaction on the Hikurangi Subduction Zone
- A47 **Whitehead N** - How and when earthquakes create light
- A48 **Glowacki T** - True Plate Tectonics Mechanisms

3a. Communication, Education, and Disaster Risk Science

- A49 **Dhungana A** et al. - Model Uncertainty - What Needs to be Communicated in Hazard and Risk Models
- A50 **Vinnell L** et al. - Influences on lahar preparedness in Mount Rainier, USA, communities
- A51 **Wavelet E** et al. - Tsunami Early Warning System: a study case of the North of New Zealand

2d. Integrated Coastal Dynamics

- A52 **Craig H** et al. - Dairy farming exposure and impacts from extreme coastal flooding and sea level rise
- A53 **Evans J** et al. - Recent Sedimentation History and Foraminifera Distribution in Governors Bay, NZ

2e. Marine geological processes

- A54 **Henrys S** et al. - GeoDiscoveryNZ and ANZIC: A Decadal Strategic Vision
- A55 **Hillman JIT** et al. - The human footprint on the seabed: Case studies from the Southern Hikurangi
- A56 **Ribó M** et al. - Repeat seabed mapping: Understanding complex morphological changes in seafloor bedforms

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- A57 **Spain E** et al. - Geomorphic time series reveals the constructive and destructive history of Havre volcano, Kermadec Arc
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- A58 **Warren G** et al. - Is this the real life? Is this just fantasia? Caught in a landslide: Megablocks from the Deepwater Taranaki Basin.
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- A59 **Watson SJ** et al. - The underwater landslide archives of Aotearoa/New Zealand: Documenting occurrence or preservation bias?
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2b. Our Changing landscapes

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- A60 **Österle J** et al. - Assessing the Pliocene–Recent erosion history of the eastern Southern Alps using cosmogenic radionuclides, tracer techniques and grain size analyses
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- A61 **Kosik S** et al. - Landscape evolution and quantification of long-term erosion rates in the Hautapu River catchment, New Zealand
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- A62 **Doyle I** et al. - Developing floodplain sediment archives to understand erosion and flood histories in contrasting catchments
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- A63 **Nisbet E** et al. - Palaeo-activity of large, deep-seated landslides in the Rangitikei Catchment, NZ
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- A64 **Singeisen C** et al. - Fault zone contributions to the evolution of the Half Moon Bay landslide complex, Kaikōura
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- A65 **Bland KJ** et al. - New insights into the geology of the Pukekohe area (Southern Auckland-Northern Waikato)
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- A66 **Coursey S** et al. - Subaqueous Geomorphology of Lake Whakatipu and implications for shoreline hazards
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- A67 **Hanson JB** et al. - The New Zealand Deep-ocean and Reporting on Tsunamis (DART) Network: Update and Data Access Steps Forward
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- A68 **Madley M** et al. - Signals from the deep – Triggers observed on the New Zealand Deep-ocean and Reporting on Tsunamis (DART) Network
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- A69 **Stern T** et al. - Do tide gauge records from New Zealand provide a reliable picture of relative sea level change over the past 100 years?
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4c. Engineering Geology/Geomorphology

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- A70 **Barrell D** & Lee J - Urban geological mapping at GNS Science
-
- A71 **Cave M** - Deja vu all over again Bola Scale Landsliding from the March 2022 Gisborne/Tairāwhiti-Wairoa Storm
-
- A72 **Wolter A, Morgenstern R** et al. - A National Landslide Dam Database for New Zealand
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4b. Remote Sensing & Geospatial Data Analysis

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- A73 **Asher C** - A low cost semi-autonomous aquatic rover for low pH, high temperature geothermal and volcanic waterways
-
- A74 **Barretto J** & Caratori Tontini F - Total magnetic intensity grid of the upper North Island, New Zealand
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- A75 **Hamling I** et al. - Towards the development of a routine, hi-resolution, InSAR derived deformation dataset for Aotearoa
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- A76 **Kearse J, Stern T** et al. - Using InSAR and GNSS to characterise present-day vertical deformation at New Zealand coastal strips
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- A77 **Morgenstern R** et al. - High-resolution surveying of landslides using UAV-mounted LiDAR
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- A78 **Spesivtev A** et al. - GeoNet's GNSS Data and Products: current state and future opportunities
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- A79 **Stevenson T** & Brenna M - A synthesis of volcanic edifice evolution based on a 3D lithological reconstruction of Heyward Promontory, East Otago, New Zealand
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- A80 **Oliver WJ** et al. - Seismic and gravity surveys characterise Discovery Deep, Antarctica
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- A81 **Pratscher K** et al. - Induction Responses from Magnetotelluric Transfer Functions in Southland, NZ
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POSTERS (Wednesday, 30 November)

1e. Okataina Volcanic Centre

- B1 **De Ronde CEJ** et al. - New bathymetric map of Lake Rotoiti, New Zealand
- B2 Elms HC, **Wilson C** et al. - Timescales of Magmatic Processes at Ōkataina Volcanic Centre from Fe-Mg Diffusion in Orthopyroxenes
- B3 **Farsky D** et al. - Volatile Evolution during post-collapse recovery of the Okataina Volcanic Centre: Insights from apatite and melt inclusion compositions
- B4 **Hall A** & Cronin S - Geological Insights into the Eruptive History of the World's Largest "Dirty" Geyser: Waimangu Geyser 1900-1904, Waimangu Volcanic Valley, New Zealand.
- B5 **Miller C** et al. - The integrated history of repeated caldera formation and infill at the Okataina Volcanic Centre: Insights from 3D gravity and magnetic models

2a. Natural hazards

- B6 **Gomez A** et al. - After the big event: Aftershock analysis and the Mw 7.2 March 2021 East Cape Sequence
- B7 **Juarez-Garfias IdC** et al. - Mapping Stress Drop Variations Along the Alpine Fault to Investigate Conditional Rupture Segmentation
- B8 Christophersen A, **Bourguignon S** et al. - Revising the magnitudes in the New Zealand earthquake catalogue to be consistent with moment magnitude
- B9 **Delano J** et al. - 'Slipping' into the sea: can upper plate faults produce coastal subsidence along the Hikurangi margin?
- B10 **Holden C** et al. - High-frequency Ground-shaking Simulations for Alpine Fault Earthquake Scenarios
- B11 **Matheson A** et al. - Identifying rupture cascades on the Alpine-Marlborough Fault System using lacustrine paleoseismology
- B12 **Newsham S** et al. - Using tree-ring growth anomalies to date earthquakes
- B13 **Hughes JW** et al. - Stratigraphy and age of volcano-fluvial and tephra deposits associated with the Te Punga Fault, Morrinsville, Hauraki Basin
- B14 **Mead S** et al. - Probabilistic volcanic mass flow hazard assessment using statistical surrogates of deterministic simulations
- B15 **Mengesha D** et al. - Crustal anisotropy monitoring at Whakaari/White Island Volcano
- B16 **Whitehead M** et al. - Short-Term Eruption Forecasting in New Zealand
- B17 **Alves LFN** et al. - Geochemical Monitoring of Volcanic Activities in New Zealand
- B18 **Perttu B** et al. - Mt. Ruapehu lahars: past deposits, present modelling, and future hazards
- B19 **Scott E** et al. - Development of a Bayesian Event Tree for Short-term Eruption Onset Forecasting at Taupō Volcano
- B20 **Sork A** & Kennedy B - A compiled historical volcanic hazards database for Tongariro National Park, New Zealand

Special Symposium NZNSHM 2022

- B21 **DiCaprio C** et al. - Kororā: a Public Portal for the NZ NSHM
- B22 Iturrieta P, **Gerstenberger M** et al. - Accounting for earthquake rates' temporal and spatial variability through least-information Uniform Rate Zone forecasts.
- B23 **Rollins C** et al. - The rates of moderate and large earthquakes in the New Zealand region, and their uncertainties
- B24 **Thinbajam K** et al. - The 2022 NZ-NSHM workflow for the Distributed Seismicity and Slab Source Models
- B25 **Van Dissen R** et al. - NZ NSHM 2022: Geologic and Subduction Interface Deformation Models

3c. Science in response & recovery

- B26 Naguit M, **Salichon J** et al. - GeoNet's Strong Motion Network: 21 Years of Products & Services
- B27 **Charlton D** et al. - GeoNet's Shaking Layer Tool: understanding and incorporating user needs into new earthquake shaking products for Aotearoa, New Zealand.
- B28 **Fry B** et al. - New near real-time automated beachballs for earthquakes in New Zealand and the southwest Pacific
- B29 **Chamberlain CJ** & Warren-Smith E - Operational template-matching for rapid aftershock analysis
- B30 **Fensom J, Nicholls DN** et al. - The NGMC in Response Mode: Examples from the March 5th East Cape Earthquake
- B31 **Chin S-J** et al. - Earthquakes and Seismic Hazard in Southern New Caledonia, Southwest Pacific

3b. GeoEducation, Outreach & Int Development

- B32 **Wood M** et al. - New windows on the world: Applications of extended reality in the geoscience classroom
- B33 **Young J** et al. - From Picks to Pixels: Developing eXtended Reality Tools for Geoscience Education and Outreach
- B34 **Boothroyd M** et al. - Fireballs Aotearoa: Establishing a network of meteor-tracking cameras around Otago and Southland
- B35 **Bull S** et al. - Who's using GeoTrips.org.nz? A user-based approach to optimizing web-based geoscience communication
- B36 **Banerjee D** et al. - Student surveys inform digital device practices in field teaching
- B37 **Wall K** et al. - Run for the Hills! - Co-Design of Games for Geological Disaster Risk Communication

1c. Zealandia through space & time

- B38 **Williams CA** et al. - Slow Slip Events at the Hikurangi Subduction Margin, New Zealand, from 2006 to 2017
- B39 **Stratford W** et al. - Crust and subduction architecture in Southland and northern Solander Basin.
- B40 **Hill MP** et al. - Mapping and analysis of the structure and topology of a brittle-ductile fault swarm at Crawford Knob, Franz Josef, New Zealand.
- B41 Sahoo TR, ..., **Strogen D** - Evolution of Cretaceous Normal Faulting in the Great South Basin
- B42 **Wu Y** et al. - Geological setting and Early Oligocene invertebrate fauna at McDonald's Quarry, Kakanui, New Zealand
- B43 **Whitten C** et al. - Nature vs nurture – Quantifying evolutionary rate and ecophenotypic variation in *pellicaria vermis*
- B44 **Strogen DP** et al. - Palaeogeographic evolution of Zealandia: mid-Cretaceous to present- Part 2

2c. Climate & environmental change

- B45 **Barrell D** - The Zealandia switch – Hypothesising the Southern hemisphere in the driving seat of global climate
- B47 Deuss K, **Almond P** et al. - Characterisation of the vertical and lateral subsurface heterogeneity in loess soils using qualitative (morphological) and quantitative (k-means) techniques
- B48 **Al-hafid S** et al. - Modelling the Response of the SPCZ to Rapid Climate Perturbations under Contrasting Orbital Boundary Conditions
- B49 **Casidy J** et al. - Disentangling climate and tectonic records in Plio-Pleistocene sediments in Southern Wairarapa
- B50 **Eschenroeder J** et al. - Deciphering the impact of climate variability on the remote alpine lake ecosystem of Lake Bright, New Zealand
- B51 **Gordon A** et al. - Development of a Chemotaxonomic Classification of New Zealand Plants – Implications for Using Biomarkers to Reconstruct Our Bioheritage
- B52 **Hanson J** et al. - A preliminary study of late Holocene sedimentary records from Te Whakaraupō | Lyttelton Harbour, New Zealand

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- B53 **Kelly S** et al. - Fossil seabirds from the Pliocene of Taranaki, New Zealand
-
- B54 **McDonald L** et al. - Understanding the variability of pollen in Hikurangi Subduction Margin deep marine turbidites for paleoclimate reconstruction
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- B55 **Penafiel Bermudez S** & Cooper T - Re-defining the J hyperthermal event via paleoenvironmental analysis of early Eocene marl and limestone alternations from Mead Stream, New Zealand
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4d. Geochemical tools and applications

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- B56 **Turnbull JC** et al. - Comprehensive update of marine reservoir values for New Zealand coastal waters to inform coastal hazard research
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- B57 **Höpker SN** et al. - Hydrological monitoring and speleothem analysis to trace modern and historic climate extremes in Hawke's Bay, New Zealand
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- B58 **Holden G** & Sinclair D - A High-Resolution Precipitation Record from a Cook Islands Speleothem: Evidence for a Teleconnection with Northern Hemisphere Climate During MIS 3
-
- B59 **Naeher S** et al. - Investigating bacterial 3-hydroxy fatty acids as new indicators of past air temperature in lake sediments from New Zealand
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- B60 **Davis AN** et al. - Decadal Scale Variability in Marine Primary Productivity Inferred from Stable Nitrogen Isotopes in Deep-Sea Corals
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- B61 **Sinclair D** et al. - Trace Elements in Black Corals – Investigating Potential New Palaeoceanographic Proxies
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- B62 **Kollsgård CT** et al. - Integrating XRF-ratios for Arctic paleoenvironmental reconstructions
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4a. Computational advances in Geosciences

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- B63 **Yousef Zadeh E** & Peters K - Australian Granite Database: a case study for large scale database development.
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- B64 **D'Anastasio E** et al. - Making GeoNet data more accessible for big data projects – GeoNet, the cloud and the AWS Open Data program
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- B65 **Burton C** et al. - Defining “good” in pursuit of “better”: a collective effort to define "good" seismic data quality using New Zealand ambient noise models
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- B66 **Lacoua L** et al. - Improving large earthquake magnitudes in New Zealand
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- B67 **Benson T** et al. - Testing the Validity of Shear Wave Splitting Measurements in the Presence of Scattering Using Synthetic Waveform Modelling.
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- B68 **Foundotos L** et al. - Validation of ground-motion simulation approaches on the 2011 Mw6.2 Christchurch earthquake, New Zealand
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4e. Geoscience for Future Energy Systems

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- B69 **O'Sullivan-Moffat H** et al. - Urban methane emissions in Auckland, New Zealand
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- B70 **Yang J** et al. - CO₂ Emissions of the Tauhara Geothermal Systems, Taupo Volcanic Zone, New Zealand.
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- B71 **Jylhäkangas S** et al. - Comparing forward models with observations of fracture-induced shear wave anisotropy in the Taupō Volcanic Zone.
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- B72 **Macnaughtan M** et al. - Preliminary results of an AVO analysis in the southern HSM: Insights into fluid and pressure regimes
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4f. Mineral Deposits: Geology, Exploration and Resources

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- B73 **Hill MP** - Aggregate opportunity modelling for New Zealand
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- B74 **Ireland M** et al. - Radiometric Sm-Nd dating of Orogenic Scheelite, Central Otago, New Zealand
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- B75 **Whitehead N** & Aharon P - The Ghost Uranium Deposit of Niue Island
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