



New Zealand Cave Rescue



35° S

NZ 4.5 Million people
350 Cavers
NZSS National Body
7 Caving groups
3 Main Caving Regions

Waitomo

40° S

West Coast

Nelson

45° S

170° E

175° E

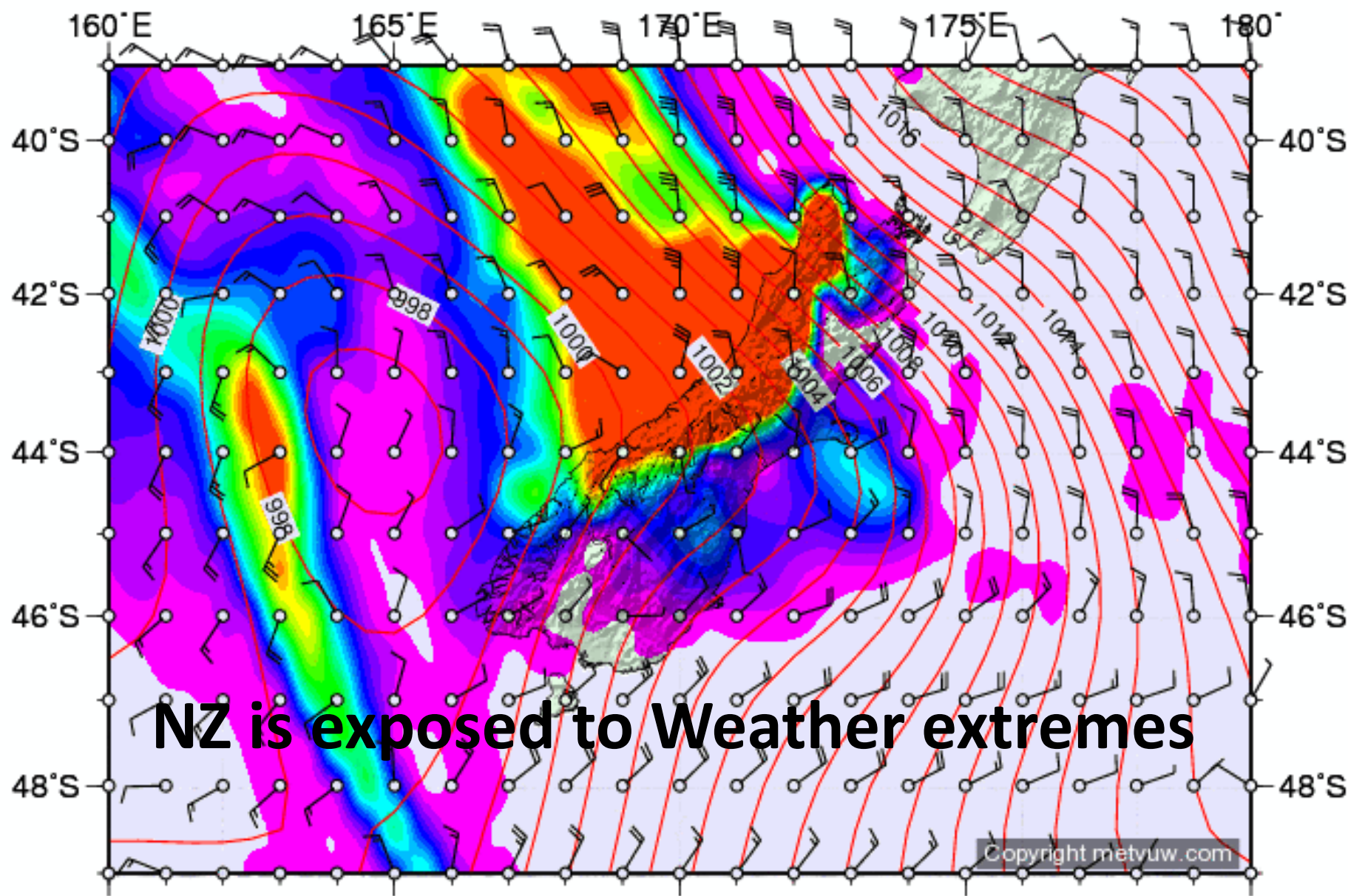


Mt Arthur Karst, one of the Marble peaks west of Nelson. NZ South Island



Valid for:- 0600 NZST Wednesday 8 April 2015

Forecasts issued at:- 0700 NZDT Thu 2 Apr 2015 (1800 UTC Wed 1 Apr 2015)



We have a very diverse range of karst:



Alpine karst to 1875m asl

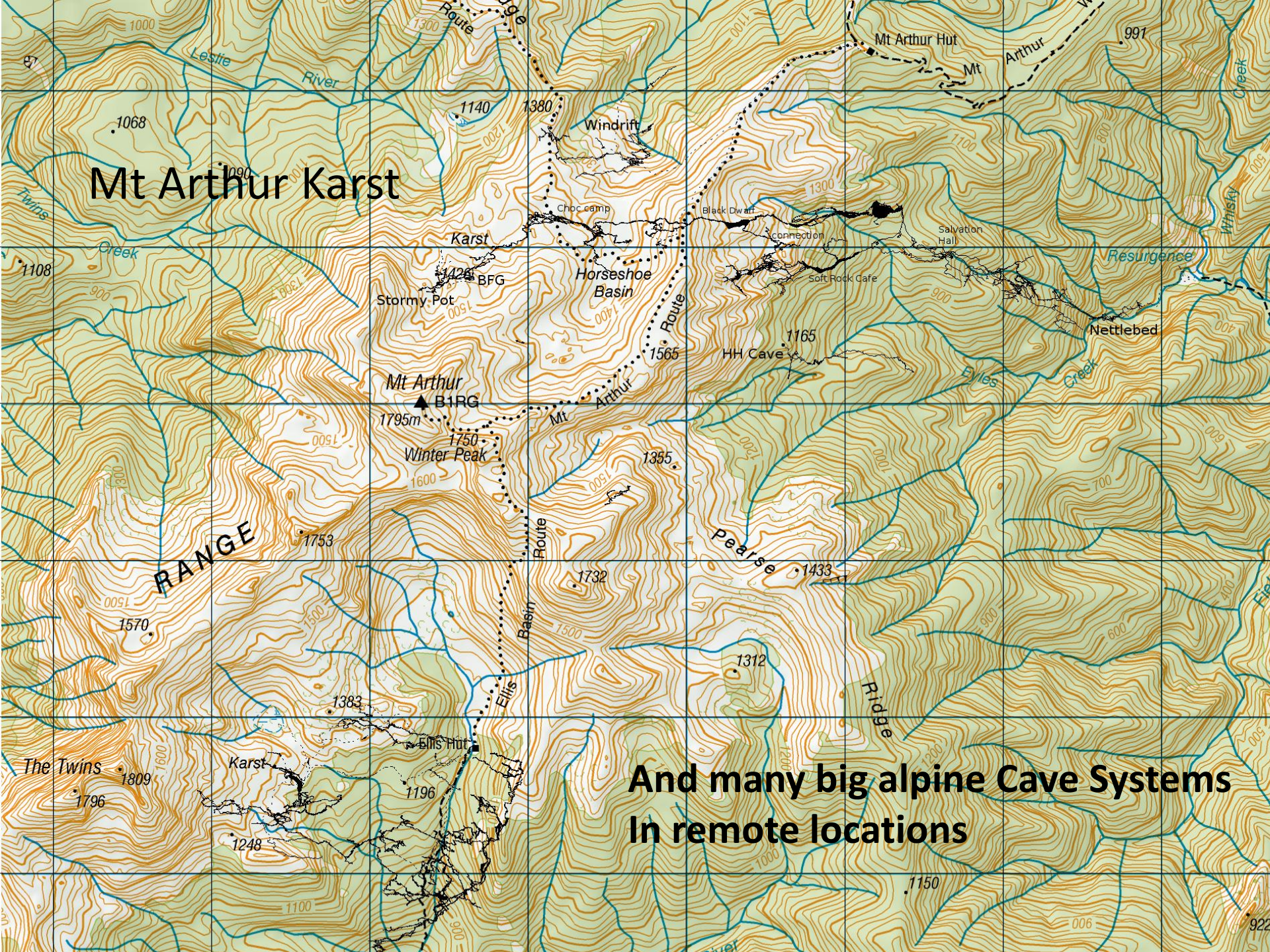


Sub Tropical lowland karst

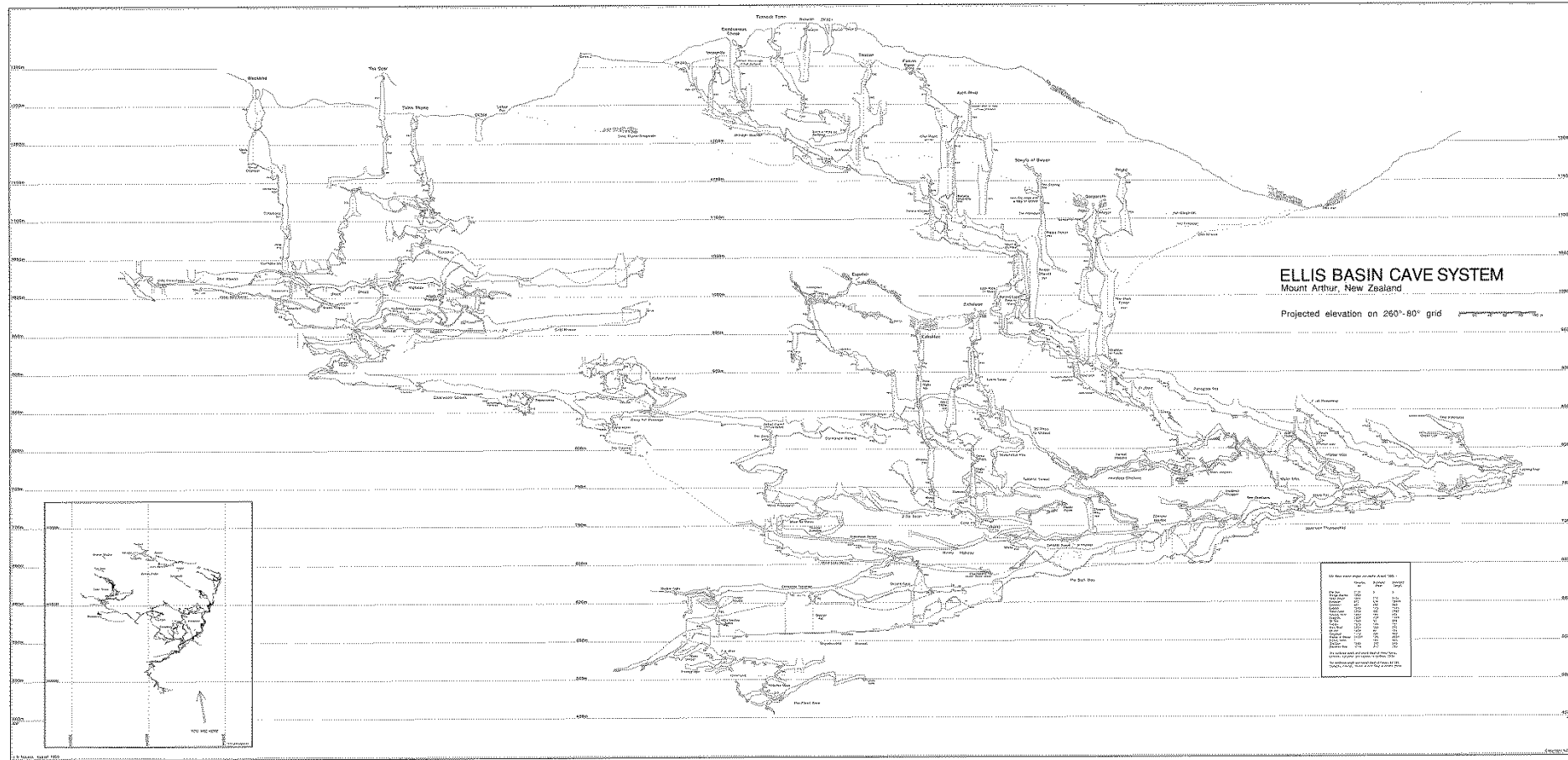


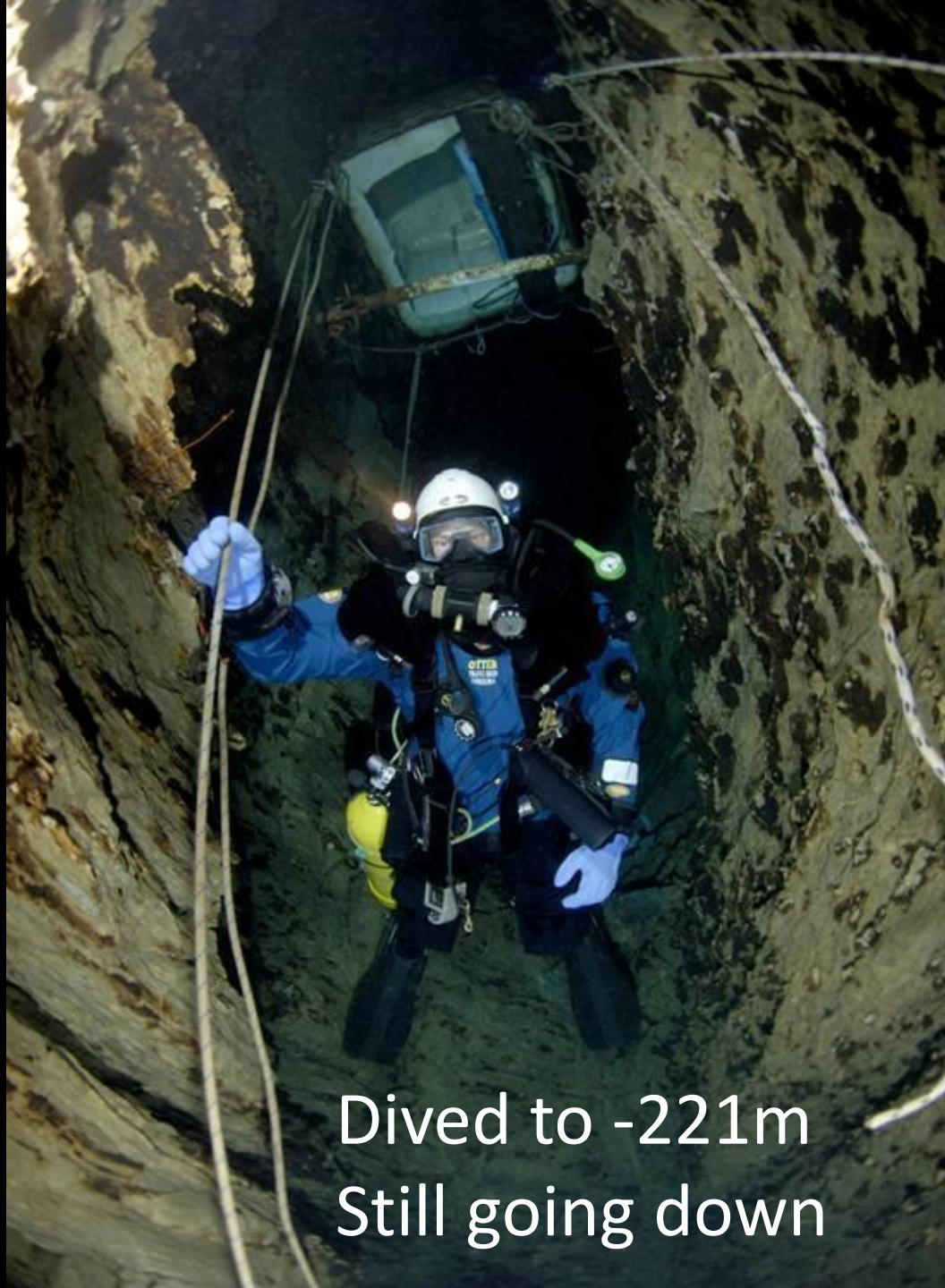
Coastal karst

Mt Arthur Karst



**And many big alpine Cave Systems
In remote locations**





Dived to -221m
Still going down

Helicopter are often used to access remote areas for cave exploration



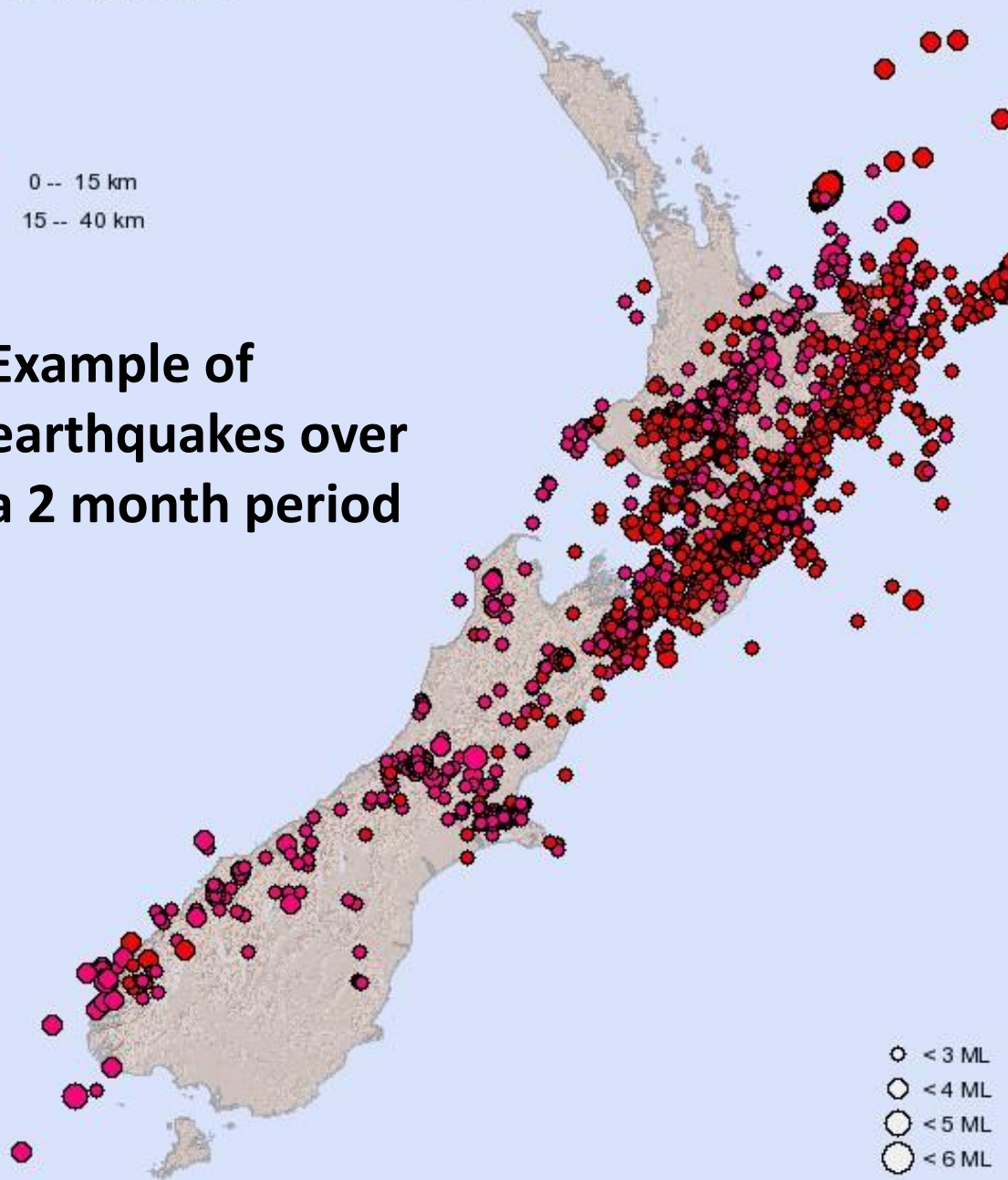


Shallow Seismicity ($h < 40$ km, last 60 days)

Mar 21, 2015, 11:50 NZDT

- 0 -- 15 km
- 15 -- 40 km

**Example of
earthquakes over
a 2 month period**



Exploration of NZ's
Alpine karst began
in the summer of
1963 on Mt Owen.

The first major NZ
deep cave rescue
occurred on that
expedition.

Also the first time
a helicopter was
used in a NZ
rescue.





Mt Owen Cave rescue 1963



A database of all Cave rescues and serious incidents is maintained.

I	1/10/2013	Summit Tomo	Bottom of 18P directly under pitch out of streamway	Takaka Hill	Caver descended 18m pitch below up rope on streamway looking for dropped Gopro. Near miss, boulder & gravel bank above pitch collapsed while caver at bottom of pitch.
I	26/10/2013	Stormy Pot		Mt Arthur	High water levels, exit delayed 24hr
I	27/10/2013	Little Harwoods	55m Entrance pitch	Takaka Valley	Assisted haul up pitch, exhaustion.
I	2/12/2013	Te Mana Nui Cave	Ramseys Run	Tablelands	Near miss - 2.5m long slab started toppling onto caver, others held it until caver climbed to safety.
A	30/12/2013	Harwood Hole trip	On walk back up hill	Takaka Hill	Dislocated knee, put back in & made it back with assistance
C	6/02/2014	10m Shaft	Ngarua Area	Takaka Hill	Walker fell 15m down shaft, knee injury. Rescued by Cavesar team
C	8-9/2/2014	Pillar Cave	Narrow Streamway Passage	Tablelands	Caver unable to return through tight squeezes. Explosives used to open up passage
A	22/03/2014	Harwood/Starlight	Balcony Pitch	Takaka Hill	Caver fell 15m when rope broke due to RF. Dislocated and fracture of right shoulder. Team self rescued.
C	23/03/3014	Mein Hole	100m into cave	Poi Poi, Waitoru Station	Shoulder & Facial injuries, fell on short climb
I	26/03/2014	Stormy Pot/NB	Red Zone	Mt Arthur	Caver squeezed through RF which collapsed after he got through, RF had to be dug out for him to return.
C	3/07/2014	Simply Sumpless	Entrance series	Takaka Hill	Novice caver unable to get back through tight passage. Several rock protrusions removed by Cave rescuers, then assisted from cave.
A	31/07/2014	Middle Earth	Cannon Ball Alley	Takaka Hill	Caver took wrong route from bottom of Lighthouse pitch, slipped while down climbing boulder landing on back. Bruising with pain to lower back above pelvis. Exited cave with assistance.
C	10/08/2014	Middle Earth	Below Camp 2	Takaka Hill	Experienced caver broke collar bone, due to RF assistance requested but party able to self rescue prior to rescuers entering cave. 20 caves personal called out.
I	8/11/2014	Stormy Pot - NB trip		Mt Arthur	Uncontrol descent of 5m pitch
C	21/12/2014	Nettlebed Cave	Resurgence	Mt Arthur	Overnight trip up the Pearse for a day trip into NB. Partv delayed 24hr

ACC

Accident Compensation Commission:

Covers the medical costs (free of charge) resulting from accidents for all NZ's and overseas visitors in NZ.

It does not cover repatriation to your country

NZ is party to the international convention to provide rescue assistance. You are unlikely to be charged for a cave rescue in NZ.

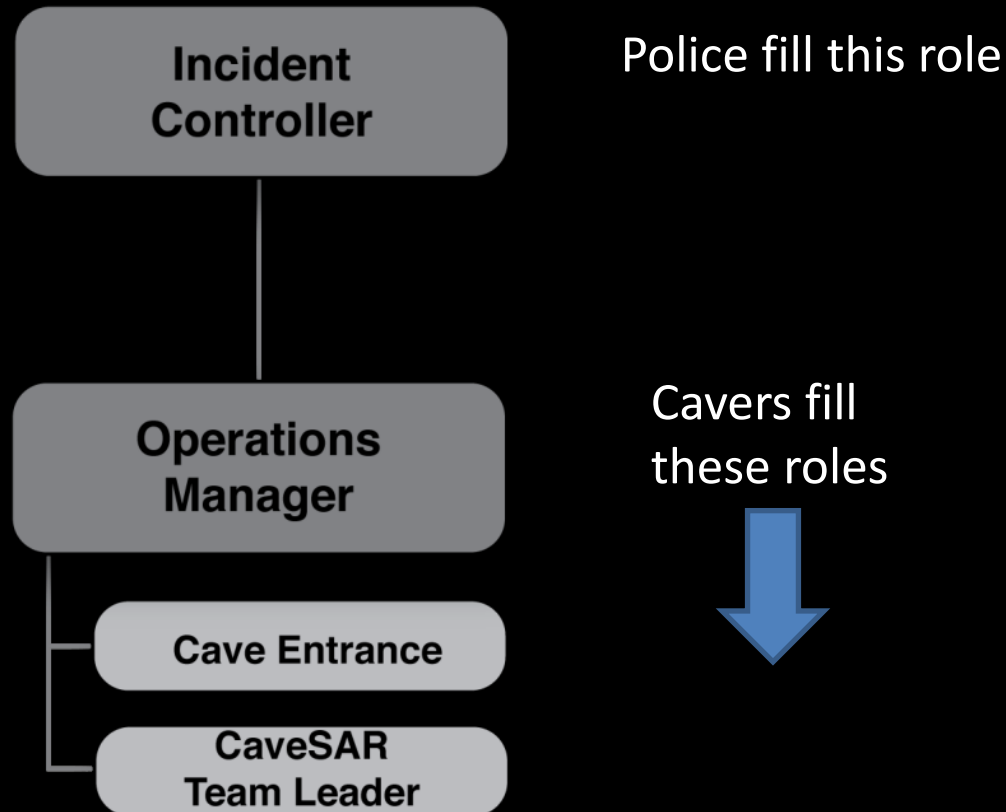
NZ Cave Rescue Incident Management

Cavers are involved for all cave rescues

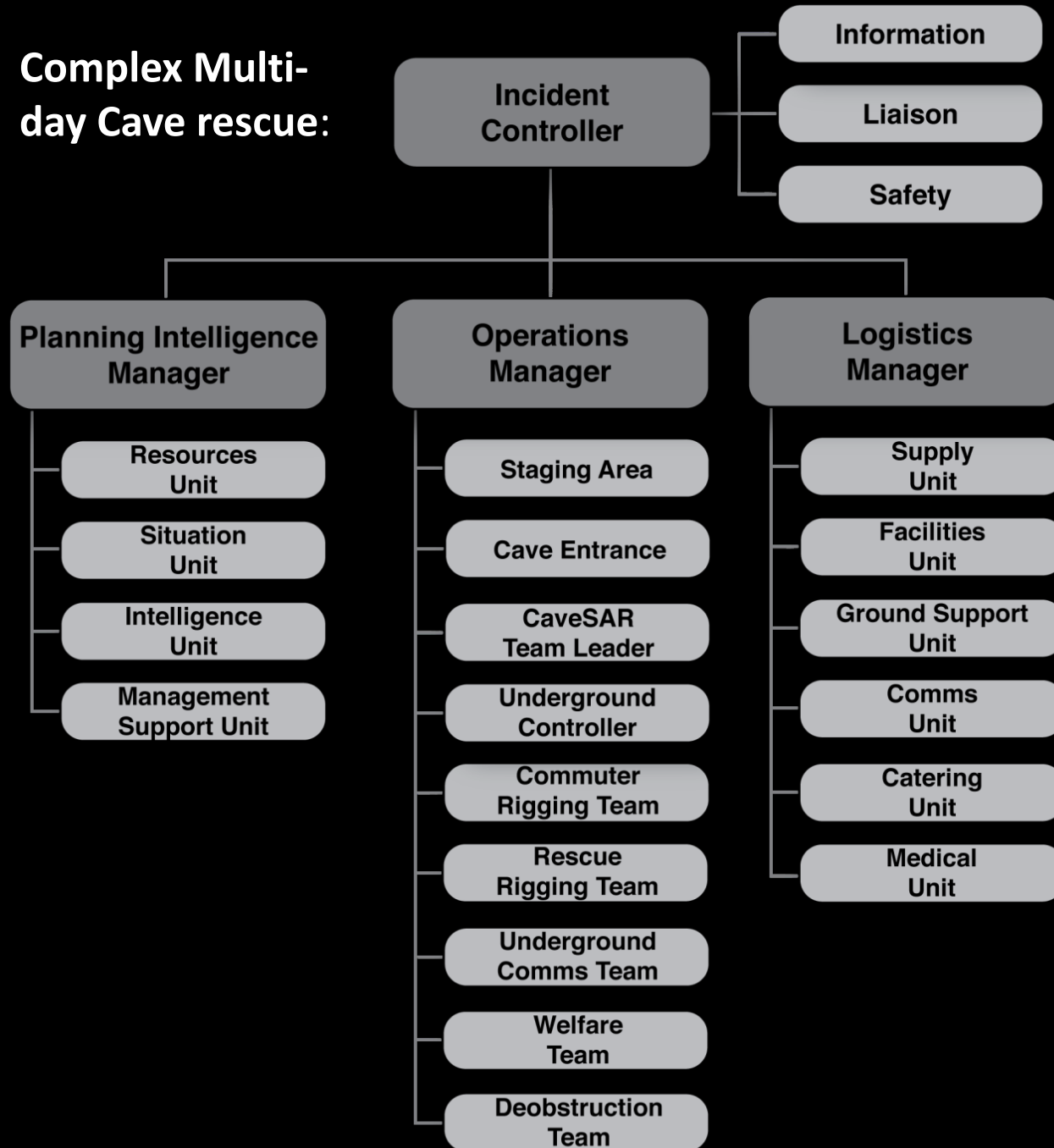


NZ Cave Rescue is a member of NZ LandSAR, we are a volunteer organisation. All rescues in NZ use the **CIMS** (Coordinated Incident Management) structure

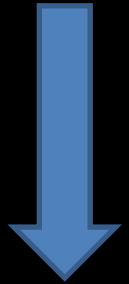
Simple cave rescue example:



Complex Multi-day Cave rescue:



Police, Cavers and other SAR fill these rolls





NZ Cave Rescue Funding

The Cost of all Cave rescues is covered by the NZ Police.

The New Zealand Speleological Society receives annual bulk funding from Landsar NZ for

- Cave Rescue Equipment**
- Local Cave rescue Exercises**
- Management & Surface support courses**
- Specialist training**
- Explosives training**



Cave rescue training targets

- **Specialist Underground training**

Rope rescue techniques, De-obstruction

First aid (external training), Stretcher, Communications

- **Incident Management Training**

For Cavers involved with coordination of rescues

- **Surface support**

A clear overview of how SAR system works & how they fit in

Forward base/Entrance team requirements

Briefing/Debriefing/Comm's

Michie Phone has been used
for the last 30yrs



Every 3 years a Deep cave Rescue exercise is held.







Training is available to all members of NZ
Cave Search and Rescue at no cost







Training exercises simulate actual rescues





Training exercises are where you find out what works and what doesn't....





How do we keep track of them?

Operation Brewer:

- 120 rescue personnel
- 22 teams
- 72 hours
- Difficult cave terrain
- Newly discovered cave passages
- Serious injury
- Multiply emergency services involved

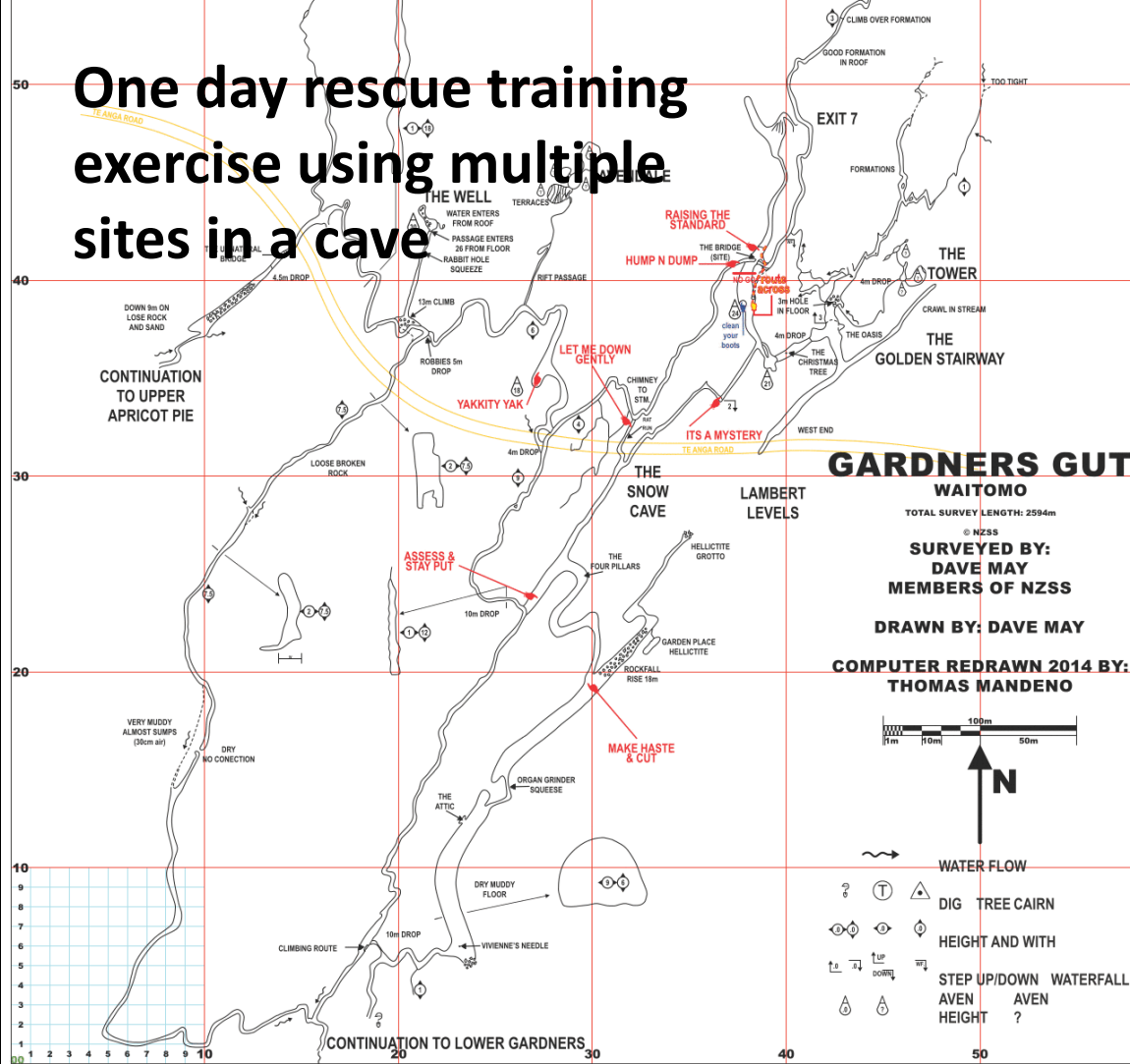


Greg Hickford	4	Fwd Base	Est. fwd base; interim manager	1/03/2013	09:00	Now in Team 11
Kip MandenoTL	4	Fwd Base	Est. fwd base	1/03/2013	09:00	Retasked to TL
Hoss Kouhestani	4	Fwd Base	Est. fwd base	1/03/2013	09:00	Retasked to TL
Dion Richards TL	5	MickieTeam	Lay Mickie Ph wire lost party intended route; to lighthouse pitch - complete	1/03/2013	11:26	Going back to Kanga House
Gavin Holden	5	MickieTeam	Lay Mickie Ph wire lost party intended route; to lighthouse pitch - complete	1/03/2013	11:26	Going back to Kanga House
Ivan Rineks	5	MickieTeam	Lay Mickie Ph wire lost party intended route; to lighthouse pitch - complete	1/03/2013	11:26	Going back to Kanga House
Alison Pickford TL	6	Fwd Base	Fwd Base Mgt; Comms to SAR Base; Team tasking	1/03/2013	10:45	
Shara Cohen	6	Fwd Base	Fwd Base Mgt; Comms to SAR Base; Team tasking	1/03/2013	10:45	Going back to Cave Hut
Adele Rewet	6	Fwd Base	Fwd Base Mgt; Comms to SAR Base; Team tasking	1/03/2013	10:45	
Dalla Riley	6	Fwd Base	Fwd Base Mgt; Comms to SAR Base; Team tasking	1/03/2013	10:45	left exercise
Kevin Mountford TL	7	Search	Rig entrance area; search main route; if locate party 2 stay, 2 return to comms; meet Kip at entrance.	1/03/2013	14:30	At Kanga House. Found gear & sleep bag. Awaiting retasking
Leo Viersma UG	7	Search	Rig entrance area; search main route; if locate party 2 stay, 2 return to comms; meet Kip at entrance.	1/03/2013	14:30	At Kanga House. Found gear & sleep bag. Awaiting retasking
Sam Lewis	7	Search	Rig entrance area; search main route; if locate party 2 stay, 2 return to comms; meet Kip at entrance.	1/03/2013	14:30	At Kanga House. Found gear & sleep bag. Awaiting retasking
John McLaren	7	Search	Rig entrance area; search main route; if locate party 2 stay, 2 return to comms; meet Kip at entrance.	1/03/2013	14:30	At Kanga House. Found gear & sleep bag. Awaiting retasking
Heidi Godfrey	8	Medical & rigging	Travel patient; escort Dr; wk back to rigging pitches; Heidi call James Alker.	1/03/2013	16:17	Reel 9 at end of Kanga House
Tim G	8	Medical & rigging	Travel patient; escort Dr; wk back to rigging pitches;	1/03/2013	16:17	Reel 9 at end of Kanga House

**De-obstruction used in a
difficult cave rescue**



One day rescue training exercise using multiple sites in a cave





NZ Cave SAR personal

A photograph of a pile of ropes and gear in a wooded area. The ropes are mostly orange and white, and are tangled together. Some gear, including a black bag and a metal container, is also visible. The background shows trees and foliage.

Additional Photo credits:

Jonathan Carr

Richard Harris

Dave Hume

Emily Lane



The end