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# NZLSAR News

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### Mt Strauchon Avalanche 26th April 2000 - A Search Dog Perspective

A call from Timaru police to respond to an avalanche in the Lake Ohau area of South Canterbury was received by the dog adviser at approximately 2230 hours on the evening of Wednesday the 26<sup>th</sup> April. It was advised that there had been an event in the vicinity of Mt Strauchon at approximately 1200 that day. Two young climbers were reported missing in an avalanche by one of their two climbing companions who had escaped burial and were able to reach an area of cell phone coverage further down the Huxley valley late that evening. Avalanche dog teams were requested to be at search HQ, situated near Huxley Lodge by first light the following morning, Thursday 27<sup>th</sup>.

Three operational avalanche dogs were mobilised, Robert Gibson and Alo from Cromwell, Brian Heward and Nanook from Wanaka and Dave McKinley and Rocky from Twizel, being the three closest dogs to the incident site.

The dog teams arrived at search HQ the following morning to join the melee of communications equipment being assembled, helicopters arriving and departing, erection of catering facilities and the steady influx of specialist personnel and equipment.

A briefing was held explaining the events of the previous day and the contingency plan for the rescue operation. Due to strong winds at higher altitudes only twin turbine Squirrels would be able to transport individual dogs

and rescue personnel to the incident site from a staging area located further down the mountain. Personnel, dogs and equipment were to be transported to this area by the less powerful helicopters. Due to the lack of a suitable landing site and wind gusts, the first party, including a dog and handler would have to be stopped on to the debris, the dog to begin searching and the remaining personnel to prepare a landing platform for the helicopter.

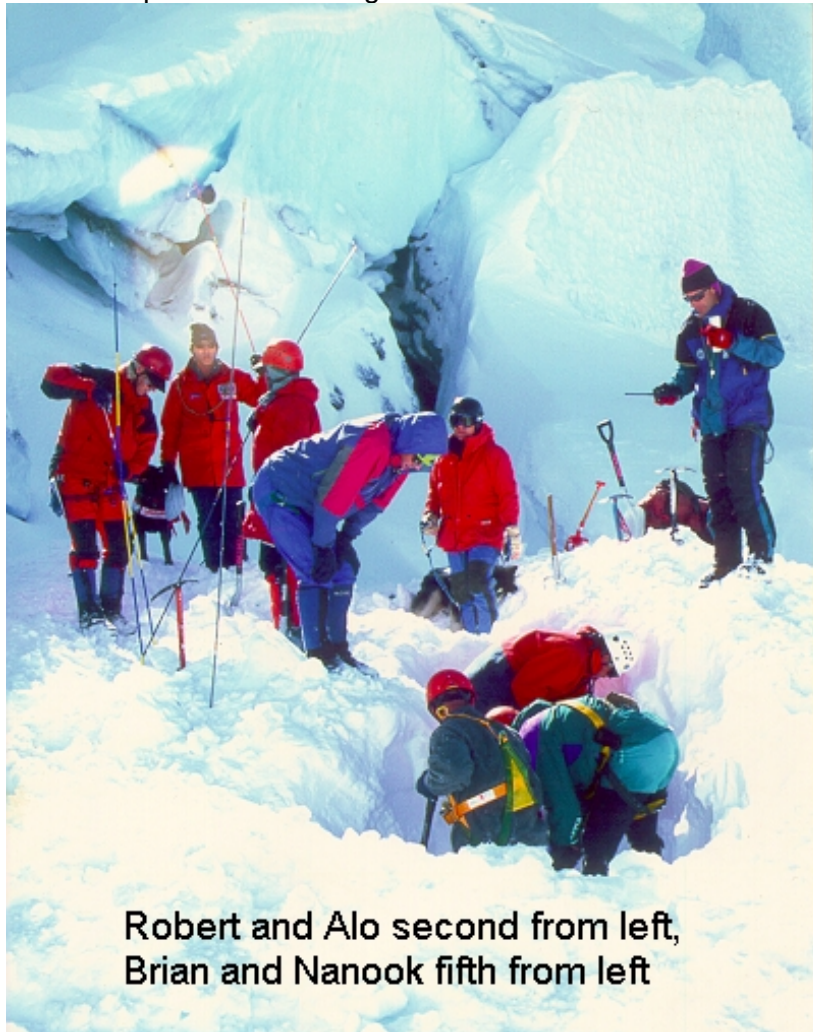
A quick discussion among dog handlers resulted in Brian Heward and Nanook pulling the shortest straw and being the first dog and handler on site. The other two were to be flown to the staging area in preparation for the second and third influx of personnel and equipment.

Brian was able to fly over the avalanche debris and reported it to be approximately the size of a large football field, the majority of the debris lay on a glacier with crevasses spanning the middle and lower sections. The decision was then made by the pilot, following a safety assessment, to hover and allow Brian and Nanook to alight and commence their search from the lower extremity of the debris.

Nanook zigzagged, using the wind to his advantage, up the debris, until he came to the area of crevasses three or four minutes later, here he gave an indication to the right of the main crevasse. Brian marked this spot with a red flag, advised the site commander of the

indication and continued on with his search. Nanook gave a weaker indication approximately ten meters away from the first. This spot was also marked and reported and he then continued on to cover the rest of the debris with no further indications. The remaining two dogs now on site were summoned to verify Nanook's two indication points. Both dogs verified that in

an area approximately four meters by ten there was a release of human scent, stronger at both ends. Consequent digging by rescuers and verification of scent release in the holes by the dogs culminated in the extraction of the first victim. The second was found ten minutes later approximately two meters away. Both were covered by one to two meters of debris.



**Robert and Alo second from left,  
Brian and Nanook fifth from left**

Two young climbers, Sean Reese and John Haworth lost their lives in this tragic incident. The successful use of search dogs by Police and NZLSAR in such incidents greatly reduced the number of rescue personnel required on site. It shortened the exposure times to known dangers, and lessened the overall risk factor so often faced by rescuers in such extreme alpine situations.

While search dogs are trained to locate living human scent, this incident demonstrates clearly the ability of the dog to locate human scent long after death, even in this example of a freezer environment with temperatures well below 0 degrees Celsius.

The dog handlers and dogs mobilised for this incident would like to thank all personnel who were involved, including immediate families of the victims, for the support, patience, assistance, and gratitude they received during, and immediately

following their deployment.

**Robert Gibson**  
Dog Handler, Cromwell

## **SAR VHF Communications Technical Notes**

### **Antennas**

The antenna provided with the SAR Hand Held 6-packs is cut for optimal use on the old SAR/CD Channels. [150MHz –foil length 900mm (923mm top to base step)] [It is suggested that you use a red band to identify the antenna for this frequency range]

The antenna provided with the SAR Portable repeaters is cut for optimal use on the ESB Band Channels. [141MHz –foil length 1060mm (1080mm top to base step)] [It is suggested that you use a blue band to identify the antenna for this frequency range]

The antenna provided with the SAR Portable Base Sets is cut for optimal use on the ESB Band Channels. [This is the same as for the Repeater antenna, and should be labelled the same]

It is suggested that the antennas be labelled and/or colour coded (as suggested above) to be able to identify which is which. One suggestion, based on a group that has already done this, is to use a Red band for the Hi Band and a Blue band for the ESB (Lo Band) antenna. Extra antenna foils can be purchased from **R.F. Industries, 18 Indus Place, Halfmoon Bay, Auckland, Phone 09-537-2683**. Don't forget the Allen key – 2.5mm – attach it to the case or base set so it doesn't get lost!

### **Base Set**

Note that the base sets are sensitive to high SWR and if used with the provided antenna which is cut for the ESB Band it will have reduced efficiency and may shut down on the E Band SAR/CD or in particular on the Marine channels. You should use the antenna provided with the Hand-Held 6-packs for use on the old E Band or Marine channels. An extra foil with instructions is the best option.

Some of the base sets were initially delivered with minor problems. The first was a programming issue for the mute, it was set to zero for ctcss control ie. continuously open. The second was a synthesiser problem with lock failure at lower frequencies (press to talk and transmit light extinguishes immediately). If you experience these problems then you should send the set to Police Information and Technology Group. They will then return it to the supplier so that these problems can be fixed.

### **Repeaters**

Note that there have been a number of incidences where the internal battery has had reduced capacity. You should make sure that the charging instructions included with the charger are followed – to the letter. The charger must be connected to the repeater before plugging in the mains cord or it may not charge correctly. The charger is operating in boost mode when the LED is red. At the end of the boost cycle, the LED goes green indicating end of boost charge (80-90% of charge) and the presence of float charge.

Note the battery will take a further 24-48 hours to reach full charge. The repeater battery should be left permanently on float while in storage. You should charge the battery for at least 48 hours after use, after this the use of a timer in conjunction with the charger set to be turned on for around 3 hours a day helps get around some of these issues. It is also noted that due to the temperature sensitive nature of batteries and charging the charger should be located as close as practicable to the repeater so both are at the same temperature. You should avoid long-term storage of the repeater in a cold location; storage at normal room temperature is preferred. Always charge promptly after use.

An external battery connection cable is available, and is recommended as part of the repeater kit for all areas (from **Halswell Technical Services, Christchurch** – approximately \$50). For it to be used the repeater switch needs to be switched to the OFF position.

It is desirable that batteries are load tested every 1 - 2 years. A 40watt car headlight bulb (3-3.5A load) should give between 3 and 4 hours for an end-point of 10.5volts – **DO NOT DISCHARGE BELOW 10.5V OR BATTERY LIFE WILL BE REDUCED OR TERMINATED**. Police Technicians should undertake this test and any replacement of the battery.

### **Hand-Helds**

Note that there are two versions of the IC-F3 Handheld. This has implications for programming. The later model has a serial number of 50000 or greater. The newer model requires a newer version of programming software than the older version. Also note that the cloning process only works between units of the same model. Any programming should be done through Police Information and Technology, a local ICOM Radio dealer, or through your AREC section if they have someone with the equipment.

Note that Bank 1 should remain programmed as supplied with the National channel selection, (this is a standard programming that allows radios to be used in any part of the country). Bank 2 can be used for any additional local requirements.

Good quality fresh Alkaline batteries are recommended as a minimum, and Lithium Batteries are highly recommended if you can get them. Do not leave batteries in the hand-holds for any length of time, even alkaline batteries can leak and cause corrosion. Batteries will perform better if used at body temperature; capacity is reduced considerably when used in cold conditions. High current capacity (transmitting) may also be reduced if new batteries are stored for more than 12 months before use.

### **Aviation Communications**

While use of Air to Ground frequencies is preferred there might be some instances where SAR teams need to communicate directly with Helicopters etc when they do not have Air to Ground radios available.

Note that if an Iroquois or other aviation resource is unable to make use of the SAR ESB Band channels then they may have other channels available. In particular for the Iroquois our Hand-Held Channel 5 (MS08 Simplex) can be used, as it is available on the Marine section of their older communications equipment. While their equipment can operate on channels with 25KHz spacing they

will need to manually set the mode to FM for channels between 130 and 150MHz. Also their equipment is for wider-band FM and not the narrow-band that is used on the new ES Band equipment, so this should be a last resort only, especially if other agencies are also using ES Band in the area.

While many aircraft operators may have ESB Band equipment installed not all do. You are encouraged to make local arrangements, however note that the preferred method of communications between Air and Ground is on Air to ground radios.

When further range is required in hill country use of HF (5680MHz) is the best choice.

### **Repairs**

Note that the radio equipment is the property of the Police, and except for emergency field repairs required for an operation; all repairs should be handled through Police Information and Technology section.

### **Steve Davis**

Chairman NZLSAR Communications Subcommittee

## **Other Documents available on the NZLSAR Web Site**

ICF3 Radio Information see <http://www.nzlsar.org.nz/comms/f3sinstr.pdf>

VHF Radio Training info see <http://www.nzlsar.org.nz/comms/vhfradiotraining.pdf>

Siting of Repeaters see <http://www.nzlsar.org.nz/comms/repeaters.pdf>

## **Deep Cave SAREX 2001**

*On the 31 February, 01/02 March NZLSAR facilitated a National underground SAREX in the Nettlebed cave complex situated in the hills behind Motueka. As many of the lessons learnt are equally applicable to land SAR I print below thoughts on the weekend as seen through two sets of eyes. JPT NFO*

### **An overview and some opinions**

**T**hursday 1 March saw the start of the mass migration of cavers from throughout NZ towards Pokororo and by the end of Friday around 70 - 80 cavers had made the rendezvous point.

The exercise officially started on Thursday evening with the briefing of the management team with the scenario.

*Four beautiful and talented young people between the ages of 25 and 30, all from the North Island, had descended to the South with the intention of exploring Nettlebed. They were heading in on Sunday through Blizzard Pot and were to spend several days underground poking around before exiting at the bottom. Unfortunately they never came back to work and only one of them had*

*actually been to the cave (a couple of through trips) before.*

On Friday much organisation saw everyone briefed and made ready to get stuck into finding the miscreants. Then time warped into slow mode due to the apparent absence of the Iroquois. Nelson, after basking in weeks of unrelenting sunshine, chose this time to bring some much needed water to people's gardens. Eventually at 1400 hours the helicopter turned up at Nelson airport to pick up the "victims". With those people finally winched down to the lower entrance at about 1515 things started moving.

As the cloud was down and there was little (read NO) hope of flying anyone to Blizzard pot a fast team of five was sent to walk in and scoot through the cave. Four teams of michie phone reelers were sent in from the bottom, and at around 2230 the team working up from Sal Hall located two of the talented and beautiful (35 – 40 year old, but who is counting) from the lost party. They were huddled pathetically at the bottom of the 5m ladder just beyond the Clambles.

It transpired that they had come down to Sal Hall on Sunday, spent the night there then explored Diamond Alley etc etc on Monday. On the way back to Sal Hall at about 1800 one (the only one with knowledge of the cave of course) had fallen from the ladder breaking her right ankle and arm and badly bruising her left leg. A sleeping bag was retrieved from Sal Hall and one other person stayed with her while the others headed out with minimal food and carbide.

Within about 15min of the "victims" being found communication to the outside world was established. A wee bit later the team coming down from the top arrived. A stretcher and rigging team were awoken and sent underground and most people in the vicinity of the accident site either buggered off or settled down for a bit of sleep while they had the opportunity. The stretcher arrival around 0700 broke their slumbers and the rescue got underway.

Meanwhile the search for the misplaced "victims" stepped up as more and more areas were investigated and nothing found.

Eventually on a third attempt to search the "Obliette" the other beautiful and talented (no comment on age) victims were located tucked away in a totally obscure spot. Another somewhat earlier search party had got real close but unfortunately their calls went unanswered, as the victims were fast asleep at the time. The lost ones were removed from the cave. Meanwhile the stretcher was moving relentlessly closer and closer to the outside world as relief people took over from the physically exhausted. By the time it reached Rockfall K (about 2030) it was time to shut down the exercise and clear the cave. Everyone had to be ready to be lifted out from the Pearse Resurgence camp at 0715 Sunday morning so the Iroquois could head off to a real SAR, in Nelson Lakes this time.

The exercise went incredibly well. The communications went remarkably smoothly. The troops were well fed even with the difficulties of having two camps (one at the Pearse and one at Pokororo – with good timing some people managed two dinners). The stretcher evacuation was fast and efficient. The injured parties were well looked after. Persistence paid off and the lost parties were eventually found despite their devious hiding place. The role of Underground Controller is becoming increasingly more useful as practise has better defined the responsibilities of this position. There was little evidence of rampant egos and a generally happy and positive atmosphere pervaded the whole exercise.

People of all capabilities can be used in SAR however there are some abilities that are absolutely essential – if you don't have all of them or can't pretend for several days then stay home:

1. **Patience** – you will always, without exception, at some point end up sitting around with nothing to do for hours on end and this could quite possibly be within the cold damp bowels of the earth. This is normal, expect it, be prepared and be happy.
2. **Know your limitations.** If you are asked to do more than you are capable of then say so when you are asked, not later on.

3. **Be a team player.** SAR is not about individuals, don't be miffed if you feel your capabilities are being underutilised – every job is important.
4. **A positive attitude.** Grumpy bastards are a pain in the butt.

As a side note I would thoroughly recommend trying out being the stretcher patient (only at

an exercise of course). All you need is complete and utter faith in your rescuers then you can relax and enjoy as you move through the cave completely effortlessly with an inspiring view of the ceiling.

**Jean Garman  
Carver, Central District**

### **So what did we learn, some debrief notes from the Management Team,**

**S**ome of the points raised at the debrief at the end of the SAREX included:-

People felt that participants should be given plenty of notice about the details of the SAREX. Requirements for gear from other areas need to be organised well in advance. It was also suggested that people could be sent information about roles that they are likely to fill eg team leader, rescue rigger etc. Everyone needs to be told about exactly where and when to turn up. This can be a two way thing. If people attending don't feel that

they have adequate information then ASK!

The helicopter pilot reinforced the need for people to use the thumbs up method of communicating with them when approaching the chopper.

Future "victims" should always take a sleeping bag (and cards, books and crosswords etc) if planning on hiding in an out of the way location.

Teams heading underground, especially early in an operation, may end up having to sit around with the injured/lost party waiting for a stretcher or communications to arrive so need to be prepared to wait and keep warm. Somewhere there's a fine line between being warm and being so laden down that you can't be a fast team. People who are likely to find themselves in this role should think about what they would take.



Patient in stretcher is transported hand to hand

If we are going to use TCA stuff then we need to be sure that the scenario is real ie that the victims go the way they should have according to the scenario. Also we may need to make everyone aware that some areas are out of bounds from a conservation point of view.

Michie phones:

- Wire needs to be checked before leaving camp. Generally you need 20-30% more wire than you have passage length to cover (we

now know how much wire we need to get to Salvation Hall for next time).

- Teams need to check communications after travelling through difficult passage where the wire may get broken eg HHHHoles. The wire was well laid – out of the way so it wasn't stood on but not so far out of the way that it was difficult to follow or a pain to take down.
- Everyone should absorb this information as it may be your turn next time! (even if like an unnamed West Coast caver you write on your registration form under medical conditions and limitations: profound fear of reeling Michie phone wire).
- One valuable lesson was learnt about the wisdom or otherwise of putting the wire under a rock to protect it when the rock was an obvious place to stand on.
- When using the michie phone it is best to say who you want to talk to then who you are – it makes it easier for people to pick-up who's wanted if everyone does this consistently

The stretcher party cunningly repacked the stretcher into two pieces so that it would fit through the HHHholes but would recommend trying to organise things into 1 pack/person rather than having an extra pack in the group. Safety goggles need to go with the stretcher.

If you are in the unenviable position of being likely to be sent underground in the middle of the night you need to be organised before you go to bed. Make your "lunch" and pack your gear so that all you have to do when you wake up is crawl into your pre-laid out overalls and eat something before you leave. Otherwise things happen very slowly in the middle of the night. It is also a good idea to have an accurate label on your tent, which means that only the people needed are woken.

The rescue worked well with people moving between stretcher carrying and rigging. Rigging gear was moved forward ahead of the stretcher rather than each obstacle being

individually rigged well in advance which meant less gear to carry out at the end. It was suggested that replacing two or three people from the stretcher party at a time would work well as not everyone tires at the same rate. The underground controller position seemed to work well this time in providing an oversight of what was happening underground and organising what needed to happen.

The management team needs to put more work into briefing search teams. Search teams need to check a passage then leave a note with the team name and what has been searched and why they stopped to ensure thorough coverage. Good coverage would be assisted by having accurate maps with all the cave passages marked on them.

There was also a whole lot of management type stuff that we can improve on for next time, which I won't go into here.

Thanks to everyone who took part – I think the fact that most people I talked to felt that they had learnt something and also enjoyed the weekend reinforces the value of holding a major SAREX every three years. Anyone want to organise the next one?

**Sarah Brewer**  
**Underground Adviser, Tasman District**

### **And a final word from the sponsors**

**O**n behalf of NZLSAR I would like to give a vote of thanks firstly to the Police for making available the finances to hold such an event. Then there are the people who gave of their time, some leaving home Wednesday morning and travelled so far; the Management Teams who worked so hard to sort out the problems; the victims who played

their parts so well; all the searchers who toiled so diligently and the caterers who kept the tummy's full. To you all, again, thank you.

**Barry Were**  
**Chairman, NZLSAR Underground Subcommittee**

**Editors Comments** A big thank you to **Robert, Steve, Jean, Sarah and Barry** for your articles. To those who proof read and check the spelling and grammar, thank you also. Copy for the **August News** is most welcome and the close-off date is **Friday 27 July**. Articles on gear, SAR training or operations are most welcome. Please either mail as neatly hand-written, printed hard copy or on a disc to **NZLSAR, PO Box 12081, Thorndon, Wellington**. Alternatively email it to **tristram.nzlsar@extra.co.nz** Even if you have some thoughts on an article but are diffident in putting pen to paper, feel free to give me a ring on **04-470-7247** and we can talk it through. Regards **John P Tristram**, National Field Officer