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April 1978

BULLETIN *of the*

Sydney

University

Speleological

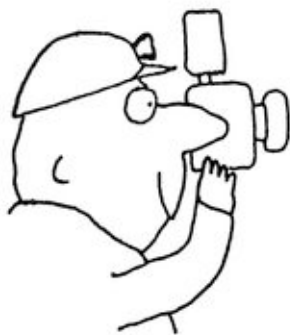


Society

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Speleology. Be in it.

A dozen'n-arf hints for happiness in the interests of bettering Australian Speleology.

1. Go for a walk. Buy a trogsuit.
2. Get your work boots out of the garage. Steal a council workers helmet.
3. Put those "National Geographic" and "Outdoors" magazines out for the recyclers.
4. Explore a drain in a local park or picnic area.
5. Join a Caving Club. Visit a caving area.
6. Go down a cave. Take your torch.
7. Cook up an exotic dish for your dinner, drink lots of wine. Do you feel heavy? Well be a heavy.
8. Visit the next months caving club meeting. Go to the pub.
9. Climb onto the mantle-piece. Chin-up on the door-jams. Get thrown out.
10. Go to another caving area. Take some photos. Don't take any souvenirs. Leave plenty of footprints.
11. Show your slides at the next meeting of your caving club. Go to the pub. Bend the elbow.
12. Sleep the night in the gutter. Degenerate. Walk home because they won't let you on the bus.
13. Run around, breathe fresh air, proclaim it's good for you. Give up smoking.
14. Buy a rope. Buy some more complicated caving gear.
15. Become broke. Eat like a beggar. Give up exotic meals which block your arteries. Bludge your grog.
16. Go on heavy and hard caving trips. Take more photos.
17. Show your slides to the club.
18. Walk to the pub. Some-one will buy you a beer.



"There's a tavern in the town...."

Inspired by the national "Life.Be in it." campaign.

Stephen Bunton.

Geoff Innes & Randall King

Report on the February, 1977 Long Range Mountains Caving Group trips to Mount Arthur and Takaka Karst Field, South Island, New Zealand.

DATES: Monday, 14th February - Friday, 25th February, 1977

PERSONNEL:

Entire Trip: Keith Dekkers (Nelson Spel. Group, NZSS)

Geoff Innes (SUSS)

Randall King (SUSS)

Rob Kay (Sheffield Uni. Spel. Soc., England)

Neil Montgomery (SSS)

Mt Arthur Only: Kitty Dunn (Alberta Caving Group, Canada)

Greg Pickford (Wessex Caving Group, England)

Takaka Only: Max Reynolds (Nelson Spel. Group, NZSS)

Seven men (well 6 men and 1 woman) gathered from opposite corners of the world in a common cause; to participate in a task, unique in its conception, challenging and physically demanding in its nature, and those rewards, if successful, would lead to international fame and glory. Yes folks, we were off to find the deepest cave in the world! (Well, N.Z. anyway.)

INTRODUCTION

Mt Arthur and the Takaka area are both located within one hours drive from Nelson, on the NW tip of the South Island of New Zealand. A belt of mountainous marble perhaps 30km long forms the three major karst areas of Takaka, Mt Arthur and Mt Owen around Nelson.

Speleological exploration in these mountains has been predominantly accomplished during annual trips by expeditions of New Zealand and Australian cavers. These expeditions are loosely known as the Long Range Caving Group trips, an informal tradition of trips containing a nucleus of the same members.

Mount Arthur

Mt Arthur consists entirely of marble, with the highest peak being one of the Twins at 1825m, and the Pearse Resurgence marking the low limit of the marble, approximately 300m a.s.l. - an "ultimate" potential of 1525m depth.

Our scientific objective was to explore the highest slopes above the Pearse Resurgence with the possibility of finding a cave draining the area. Because of the extensive frost shattering above 1280m, the "real" potential of this area is considered to be 950m depth - which would still be a decent cave. The deepest cave in New Zealand is currently Harwoods Hole, Takaka (357m) and the deepest at Mt Arthur is 330m in the Ellis Karst Field (see James, 1970; James & Montgomery, 1971), Gorgoroth Cave. Blackbird Hole (317m) and Frigid Pot (310m) are also

in the Ellis area.

The Pearse Resurgence is the primary source of the Pearse River, and has a regular outflow of 1 to 2 cumecs and far greater in flood. The theory is that the Pearse Resurgence drains most of the Western and North Western slopes of Mt Arthur. Except for very low streams that quickly sink, all drainage on this side of Mount Arthur is subterranean. Divers have penetrated the Resurgence for 100m or so without reaching a negotiable cavern (Dekkers pers comm; ref also N.Z. trip reports).

Prior to our trip only brief explorations had been attempted in the Mt Arthur area - on one Long Range Mountain Caving Group Expedition and on a few sorties by local cavers. Ours was the first systematic and thorough exploration of the valleys above Eyles Creek (a tributary of the Pearse).

LOG

MOUNT ARTHUR GOURMETS AND GASTRONOMERS EXPEDITION - 14.2.77 - 21.2.77

Monday 14th February

Neil, Geoff, Kitty, Rob and Randall had all assembled in Nelson, staying at Keith's residence. The morning was spent buying supplies - would you believe \$100 worth of food for six people for one week's eating? The mountains of food were stacked on the kitchen floor, and everybody was horrified at the thought of carrying this in their packs up a 1000m mountain for 6 to 7 km. Eventually we all packed into Keith's and Greg's cars and choofed off to Mt Arthur at 4p.m.

The walk into the "Dog Kennel" took 2 hours and we finally arrived at the hut on sunset. The N.Z. Forest Service a service to walkers ("trampers" in N.Z.) by placing these well constructed huts in strategic areas through out N.Z.

Tuesday, 15th February

Leaving the "Dog Kennel" at 0800, 3 hours walk later, carrying packs in the 25-30 kg weight range, we headed towards Eyles Creek - Upper Pearse Valley.

Mount Arthur

Carrying heavy packs is hard yakka at the best of times, but when you have to climb up 2000' of mountain and then down 1000' of steep slope on the other side, things become pretty desperate.

However we all made it safely to the campsite just below the bushline at about 4000' in the Pearse Valley on the NE side of Mt Arthur (Cobb map reference 363106). Eventhough the walk in was very strenuous, it was more than compensated by the spectacular scenery of a sea of cloud floating across the coast and lapping on the mountainside which is riddled with sinkholes.

The tents were pitched down the side of the hill, and food and

GUINEVERES HOLE - P10

surveyed
drafted &
drawn

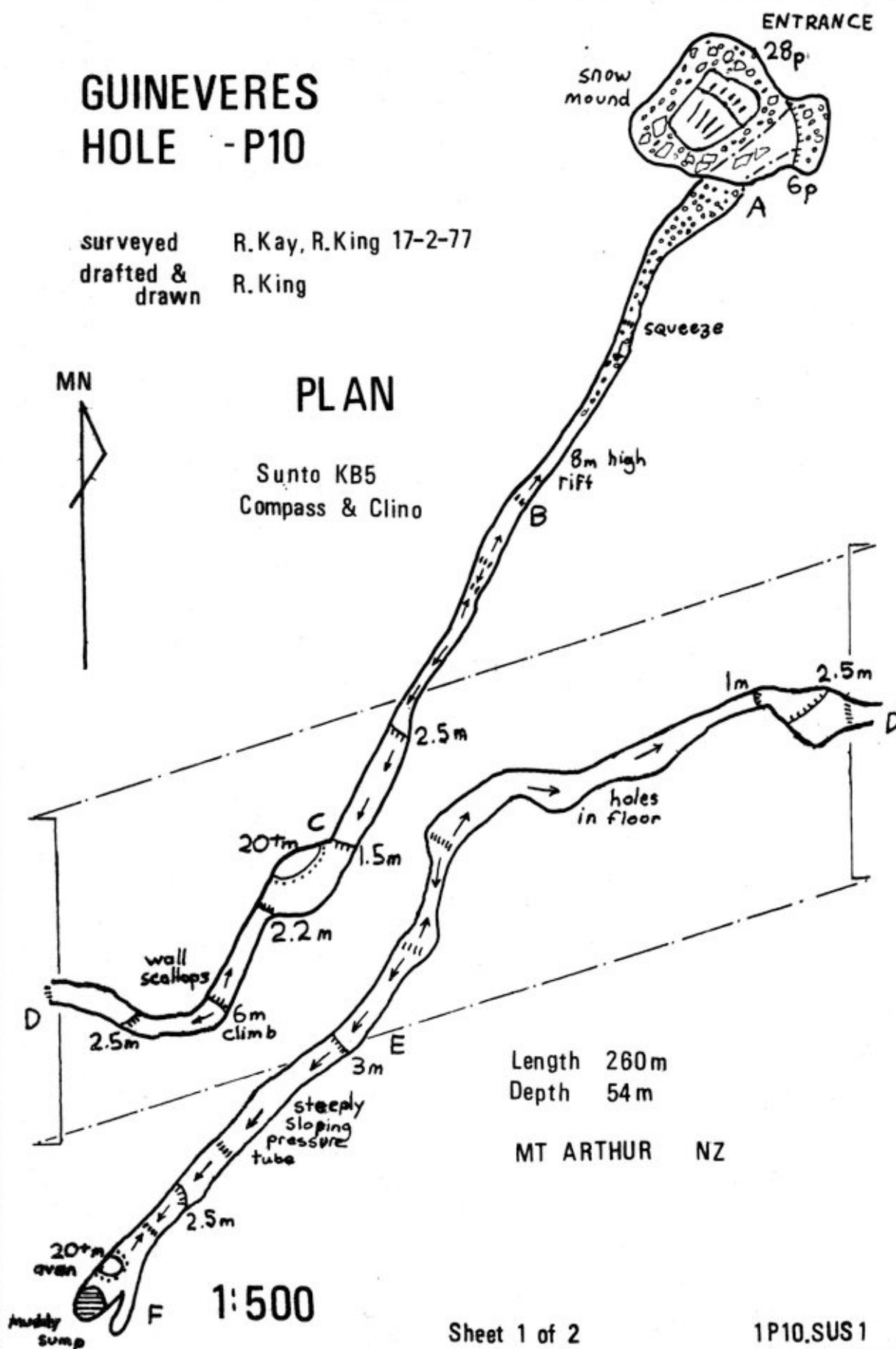
R.Kay, R.King 17-2-77

R.King

MN

PLAN

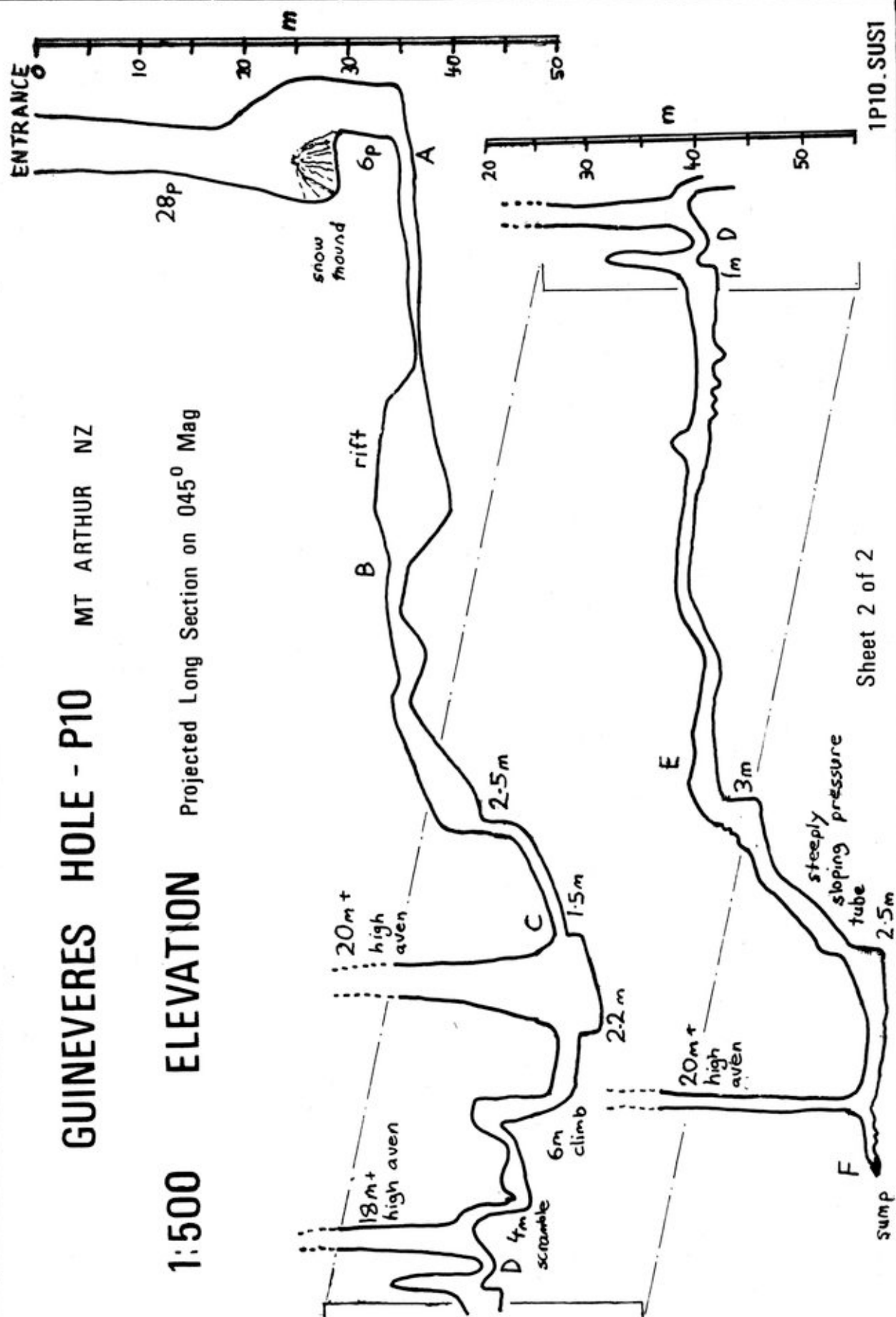
Sunto KB5
Compass & Clino



GUINEVERES HOLE - P10

MT ARTHUR NZ

1:500 ELEVATION Projected Long Section on 045° Mag



Sheet 2 of 2

gear were sorted out. Perishables were placed in the larder; a small sediment filled sinkhole with a draft blowing out the small hole in the bottom, which was situated about 3m from the fireplace. This food was later transferred to the fridge; a small collapse doline again with a draft about 10m from the fireplace. We finally persuaded Randall not to dig in the fridge as there plenty of other caves close and handy to the campsite with much better potential.

The water supply was half an hour away in a tarn. Two people were rostered each day for water duty, an unsavoury task.

All we needed to do was to find a cave going from the top of Mt Arthur (1778m) to the Pearse Resurgence (335m) about 5km away, then we would have a world beater of 1400m deep. However, the chances of doing this were not very high, that a New Zealand depth record was well within our grasp.

During the afternoon, Neil, Kitty and Randall examined the hillsides to the NE of the campsite above the bushline, and located two shafts; 40m and 24m. The practice of building rock cairns outside each shaft to be investigated was followed here and for the remainder of the trip. Beware the tramper who follows cairns as route markers!

Keith, Greg and Geoff meanwhile investigated the area to the NW of the campsite, bottoming a cave discovered on a previous trip (P 1) at 60m but revealing no new leads.

After this we started to make our way back to camp about 300m away (or about 15 minutes walking time), and on the way fell down two more "duty holes" which ended after about 45m in rubble and boulder holes.

Rob followed the Upper Eyles dry creek bed down through thick bush, marking two holes for further exploration.

Wednesday, 16th February

The group divided into two teams for the day. Rob, Kitty, Randall and Neil worked their way up to the head of the valley (1450m a.s.l.) below Winterspeak, checking out as many holes as possible. On such a lovely day it was distracting to sit in the sun above a scattering of clouds and watching the view many kilometers out to sea!

After descending a dozen or so shafts in the 20-30m range a major cave was discovered. The entrance pitch onto a snow pile in a cavern led to a further 6m pitch, followed by a 600m dry streamway. It was called Guinnevers Hole (P10) since Guinnevers Breast was nearby (see map).

Keith, Greg and Geoff reached the previous day's objective (P1) and then began the search from there. They checked out a few

MAGIC ROUNDABOUT - P5

MT. ARTHUR, NEW ZEALAND

surveyed : N. Montgomery, K. Dunn

18-2-77

drafted : N. Montgomery

drawn G. Innes

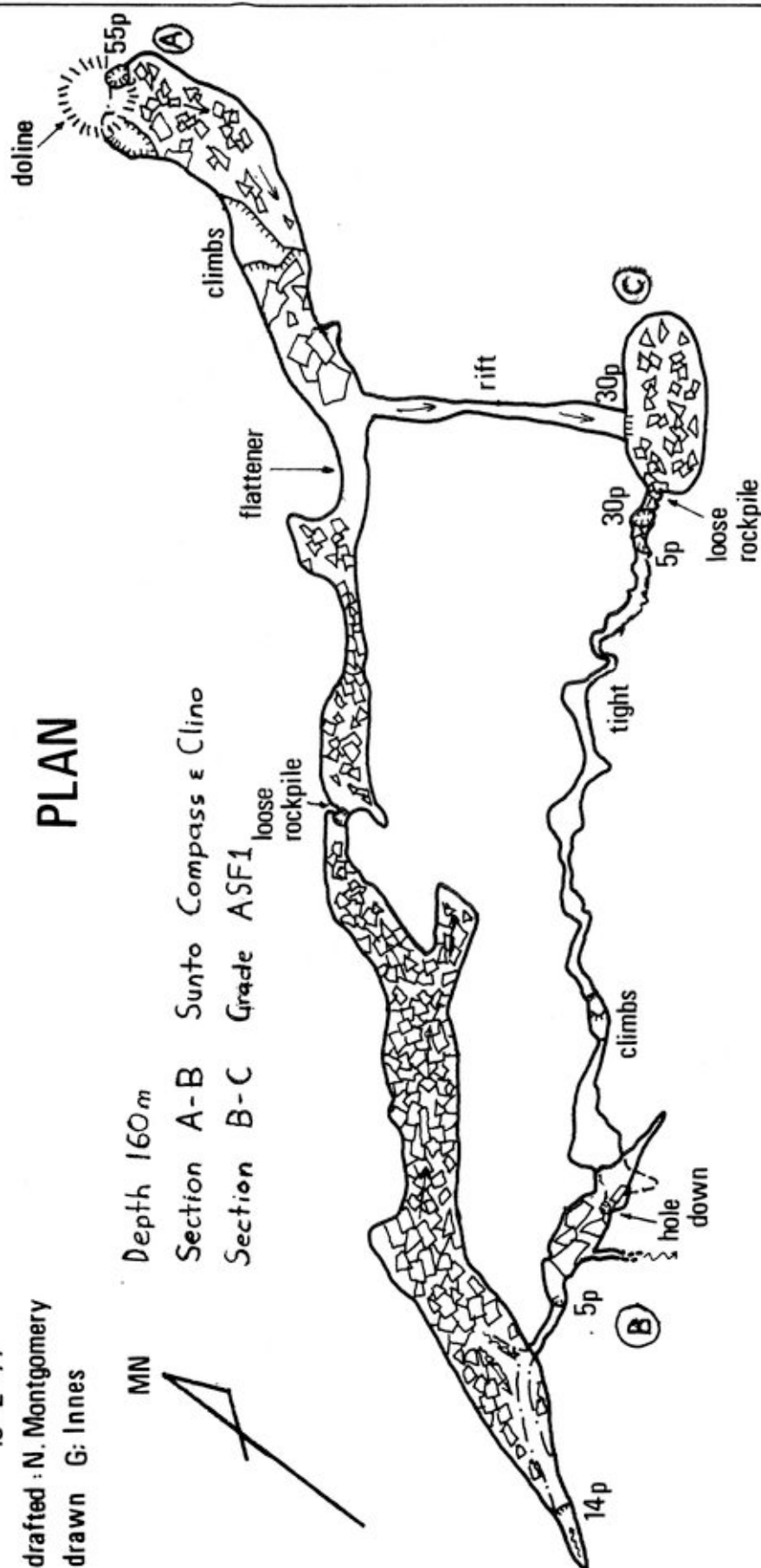
PLAN

MN

Depth 160m

Section A-B Sunto Compass & Clino

Section B-C Grade ASF1



1:500

1P5.SUS1

interesting dolines and rolled boulders down a few shafts, but none of them went.

We stood on a small ridge and cast a discerning eye across the rugged karst, looking for dolines and other obvious entrances, and spotted several on the west side of the Pearse Basin about an hours walk away.

After going about 50m Greg called out that he had found a shaft with a wind blowing out of it. Keith and Geoff went over to it, and indeed the draft coming from the cave was the strongest that any of us had experienced. After the "rock test" we threw 60m of rope down the shaft and soon discovered that it only just reached the bottom. This pitch emerged into a huge rockfall chamber which continued down and led into a narrow rift passage which ended in a pitch of depth estimated as at least 30m, but we only had a 22m rope with us. So we back tracked and pushed all the side passages. After going through a low squeeze full of flat bladeliike rubble, we emerged into a long rockfall chamber containing several high avens. By this time Keith and Greg needed to charge their carbides, while Geoff grovelled about using an electric. He pushed a hole in the floor at the far end of the chamber and went through a terrifying squeeze of broken crud rock held together with extremely soft, glutenous mud, expecting the whole lot to collapse at any moment. But this breakthrough led to another enormous rockfall chamber with even more avens, but finally petered out in a meandery rift passage, with an active stream passage 15m below. At this point Greg and Geoff returned to Keith and all went back to camp eager to tell the others of the Mt Arthur "Master Cave" ("Magic Roundabout", P5: see map).

Thursday, 17th February

With a 100m going cave that had a massive draft and over 300m+ potential, Rob and Randall were reluctantly committed to fulfilling their obligations by surveying Guinnevers Hole (P10) found the previous day. Of all the deep caves on the slopes, we had been unfortunate enough to discover a 300m long horizontal meandering streamway cave. Two or three more deep rifts were inspected in a line on the pavement area above Guinnevers Hole without result. (Tryclops Cavern (P12) was later found in this area).

Keith, Greg and Geoff returned to their cave (P5) with Neil and more rope. We quickly went to the top of the 30m pitch where Keith and Greg started to rig it. Neil and Geoff went off to the streamway and we all decided to meet back together in one hours time.

Neil and Geoff dropped into the streamway and began to follow its meandering vadose canyon. Two small pitches of 5m were encountered along the way before it became too tight for further exploration. However, just before this point a 3m climb up a large rockfall revealed an abandoned streamway passage even more horrible than the active streamway.

We continued along this for a considerable distance, while the passage showed no signs of improvement. We both decided to turn back while we still had lights, and continue on some other day.

So with fading lights we emerged through the final squeeze to find Greg waiting for Keith to catch up to him. Our scheduled rendezvous was only 2 hours late.

Keith and Greg, like Neil and Geoff got carried away with exploration and had forgotten about the time. However, their news was that after the 30m pitch the breeze was traced to a tight rift that, according to Keith, would need blasting to get through. They found a small rockpile and started to dig, and hence revealed a 45m pitch which ended in a muddy swamp. This made a total estimated depth of the cave at least 170m.

The late arriving Guinnevers survey crew was guided through the evening fog by spirited cat calls up the mountainside from camp. Mt Arthur fog is the real thing and it pays to painstakingly remember the valleys when its route is fine and sunny.

Although rainy and miserable, the evening was celebrated around the fire duly fortified by song and Southern Comfort.

Friday, 18th February

After a leisurely gentlemen's breakfast, Rob and Randall headed down the Eyles Creek gully below the campsite to investigate 2 holes previously seen. One was named Misadventure Hole after Rob's 3 hour exploration (see "map"), but was only some 20m deep.

Neil and Kitty returned (P5) to continue pushing the streamway and to survey it on their way out. They continued a fair way further and came across a tight, sawded rockpile which was penetrated after a great deal of difficulty, and revealed a long pitch on the other side. But just as their enthusiasm reached a climax, Neil noticed a pile of spent carbide on a nearby rock. They were at the bottom of the 30m pitch that Keith and Greg had descended the previous day.

They had to go back through the streamway knowing that if the rope had been left down the 30m pitch, they could have been back at the entrance pitch in 15 minutes. The cave was christened the Magic Roundabout.

MAGIC ROUNDABOUT - P5

MT ARTHUR NZ

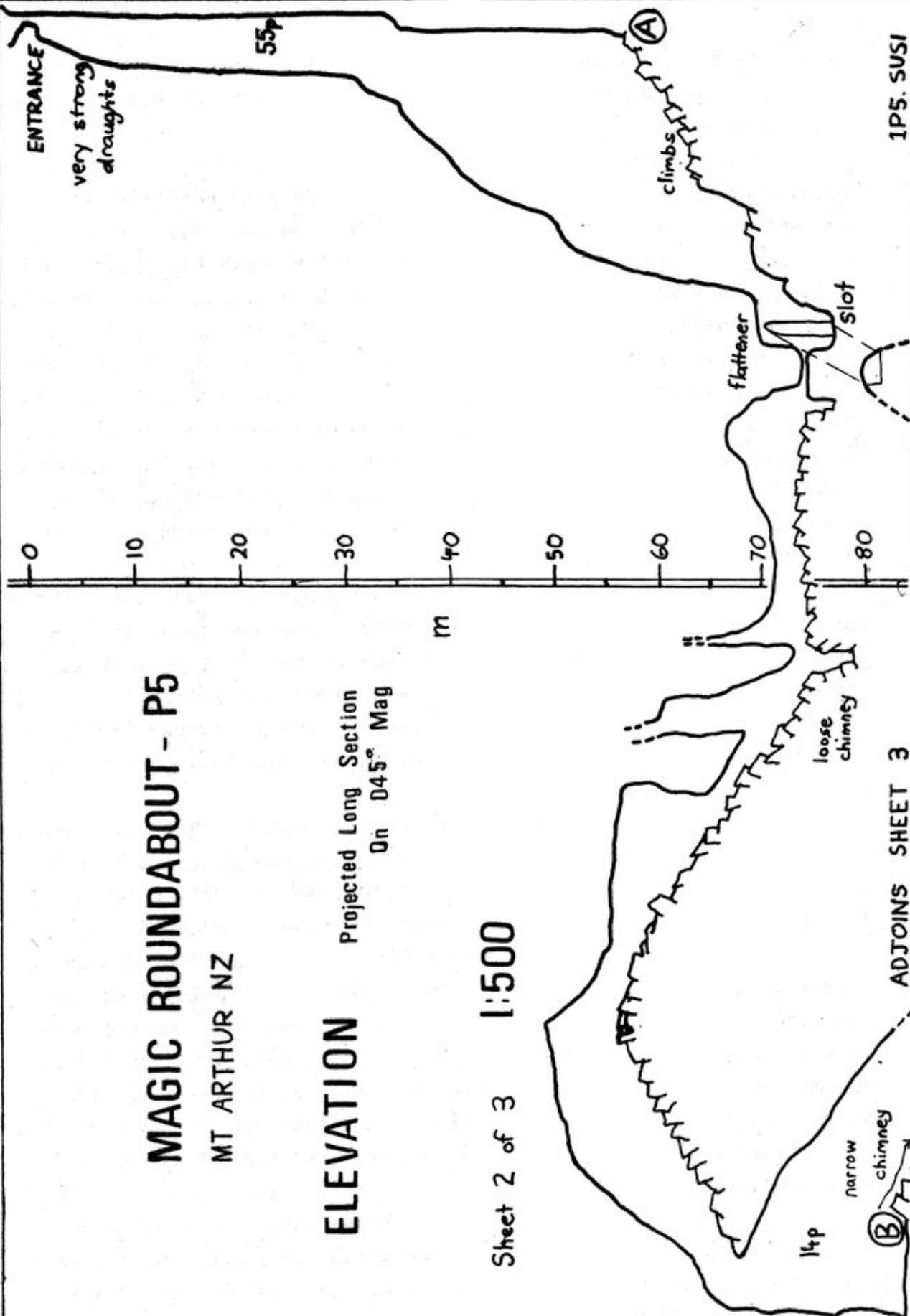
ELEVATION

Projected Long Section
On 045° Mag

Sheet 2 of 3 1:500

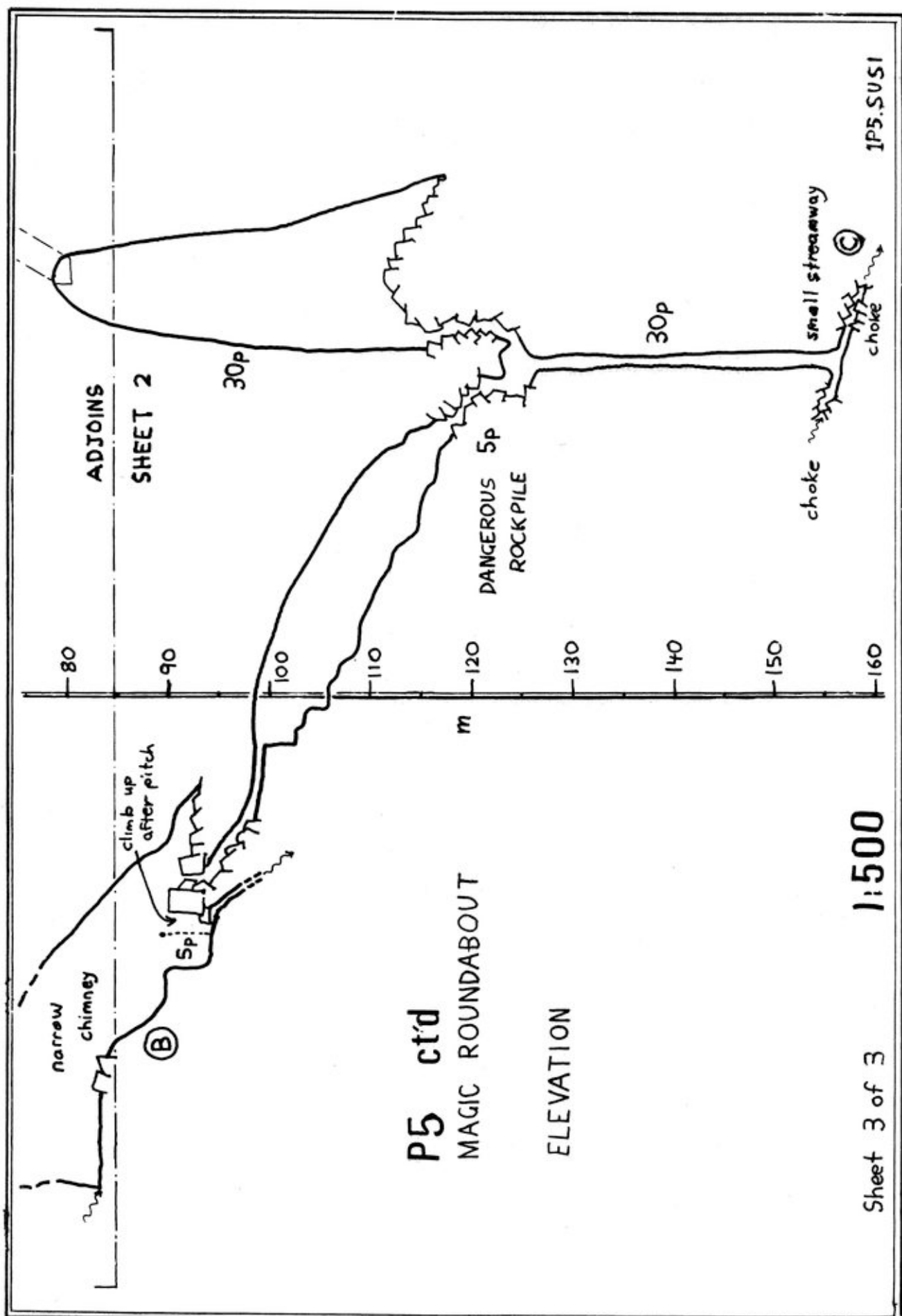
ADJOINS SHEET 3

1P5. SUSI



P5 ctd
MAGIC ROUNDABOUT

ELEVATION



Keith and Geoff went for a walk west of the Magic Roundabout to check out some rather obvious looking entrances, but as usual, some of them went.

Greg walked out and went back to Nelson the same day, as he had to do some track cutting on Mt Owen.

Neil and Kitty arrived back at 9 p.m. after their 10 hour surveying trip, greeted by a "Musicians Union" meeting of guitar, tin whistle and kazoo.

Saturday, 19th February

This day brought a refreshing break from caving, as the five of us headed to climb the Twins, while Kitty sewed her Busy Bees back together again.

The scenery from the saddle between Winter Peak and Mt Arthur was most spectacular as well as the view into the Ellis Basin. The Twins looked a long way off, and cloud rolling over the ridge between it and Arthur made us decide to climb Mt Arthur instead.

After a quick snack on the summit, we dropped into the Ellis Basin and had a wash in the frigid waters of the creek. From here it wasn't far to the Ellis hut, where we stopped and finished lunch and slept for an hour.

We eventually started to head back towards camp via the bushline, and encountered a stream that sank in its bed. We hoped that it would disappear down a shaft, but none was found, despite intensive searching. It appears that the creek had not been previously investigated.

We were urged on to camp by the cries of "camp's only just over the next ridge", but it did not materialise until about 8.00 pm, after we had crossed countless ridges and valleys.

Sunday, 20th February

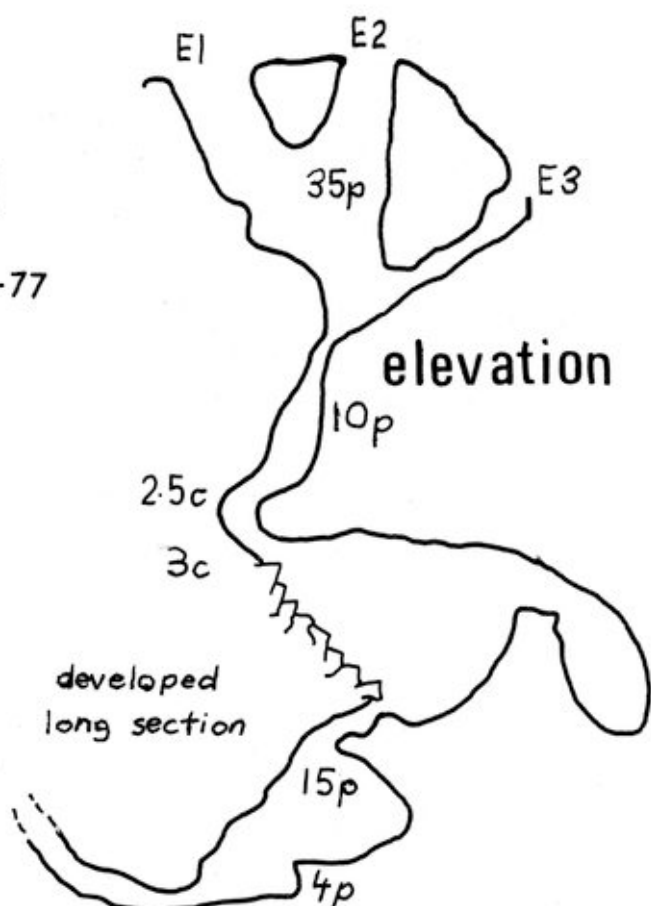
Our first bad weather for the entire trip. There was continued drizzle all day which strengthened into rain during the afternoon. We spent all day checking shafts which had been seen on previous days. Neil and Keith found a reasonable cave of approximately 110m depth, which they thought may turn into the deepest cave, since this was to be our last day on Arthur. The cave was named TRYCLOPS CAVERN (P10) because of the three entrance shafts (see map).

That night was spent huddled around the fire trying to keep warm, and sorting out our last remaining food supplies.

Monday, 21st February

We awoke in the morning to the sound of rain and the chill of a partially wet sleeping bag. We scoffed the remaining food and drank as many cups of tea as we could. Neil suggested that we keep some food for emergency purposes, in case someone broke a leg or some-

MT ARTHUR NZ

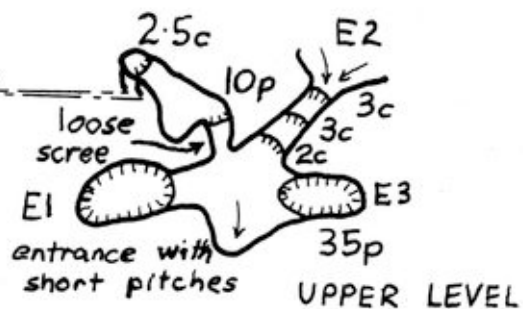
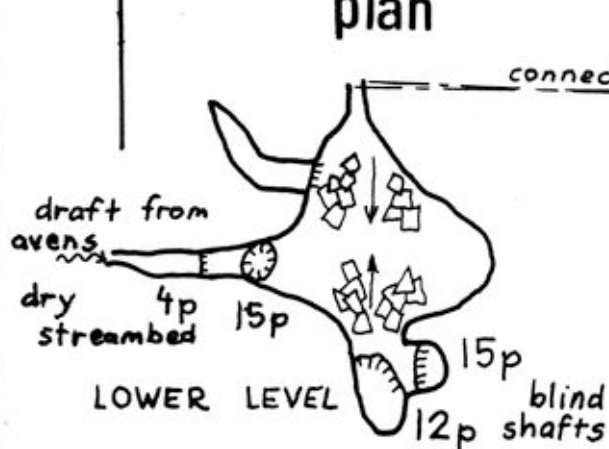


APPROX SCALE 1:1000

MN (approx)

plan

Surface Valley



APPROX SCALE 1:2000

GRADE ASFI

MAP 1P12.SUSI

thing. This consisted of $\frac{1}{2}$ lb of butter, 1 packet of barley sugar, $\frac{1}{4}$ packet of tea and some orange cordial.

Fortunately, no emergency arose, so we ate it all when we stopped at the Dog Box for a rest.

The rain had eased off after we climbed up onto the main range but there was thick cloud all about and we could not see the panorama as we had done on the way in.

On reaching the carpark, we dropped our gear and Keith began a shuttle service down the steep mountain road back to Nelson.

Tuesday, 22nd February (TAKAKA)

A day was spent in Nelson washing clothes, reorganising gear and buying more food before heading off for Takaka Hill, our second caving objective area.

We quickly sat ourselves up in the Woolshed and organised the gear to do Harwoods Hole, the deepest cave in N.Z. (356m), that afternoon. The Woolshed is on private property and is leased from the farmer by the local cavers when it is not in use as a shearing shed.

After a pleasant 45 minute stroll through the bush, you suddenly come across Harwoods Hole, a yawning 176m deep shaft with an area equivalent to that of a football field (well almost anyway).

We rigged the pitch on the lower side giving us a free abseil of only 150m, the higher side of the shaft being about 60m above us.

It was Neil's birthday, so he went down first. Randall followed and set the record for the fastest descent; the rope slipped out of three notches in his whaletail as he crossed the last rope protector about 10m from the top, and then plummeted to the knot about 30m above the deck - badly ropeburning his hands and legs in the process!

Rob and Geoff descended without incident. The immense cave quickly developed into a glorious stream passage with incredible formation. Walking along the sparkling flowstone could not be avoided unless you were a fly! We emerged from the resurgence a few hours later and started the long climb back to the top of the pitch. We were overtaken by darkness, but continued upwards not really having our nerve, but having supreme faith in Neil's judgement (as he had been there before). We arrived back at the Woolshed at midnight and crashed.

Wednesday, 23rd February (TAKAKA)

Descending Greenlink was the next task at hand. With 18 pitches half of them in fast flowing, freezing stream, and 300m depth, this cave has a reputation as perhaps the "hardest sporting cave in the Southern Hemisphere" (well, bar Atea!) Ours was to be only the seventh trip to the sump; the previous trip being during January's assault by another Australian/ New Zealand team (Warild, 1977).

The first job was to sort out the gear for Greenlink and determine how we were to bottom it. Either rig half of it one day, then go to the bottom the next, or have one big push? We decided on the latter - the big push!

Max Reynolds, a caver from Nelson, joined us on this trip and swelled our numbers to six.

Neil and Keith set off from the Woolshed at about 2.00 pm with two rope packs, and started to rig the cave. Randall and Max followed an hour later with two more rope packs, and finally Rob and Geoff were last in, two hours after the leaders carrying yet more rope.

The cave started off as a tight meandering vadose passage, but quickly opened out into a large passage containing a small stream. Eighteen pitches were encountered before reaching the sump. We were all there by 7.30 pm. This time we had to go out the same way we came in (unlike Harwoods).

As the rope packs were filled, those who had been underground longest would go out first to the relative warmth and dryness of the night air.

Now the great saga of the night nonrescue began.

Neil, Keith and Max exited first whilst Geoff, Rob and Randall folloed up derigging. However, above the waterfall pitches, the latter group lost themselves in the rockpile and entered a relatively unknown new section of Greenlink. Three hours later, they managed to find the correct route - but very worn out from dragging heavy rope packs with wetsuits on. (The cave is only 4°C in the water sections so wetsuits are necessary.)

Meanwhile, Neil and Keith had driven back to the homestead and crashed. Max began to get worried when no-one had shown up by 1.30 am, when they should have been right behind him. Consequently he drove back and woke Neil and Keith who went back to the cave and trogged up in their cold, wet wetsuits. Just as the rescue party was about to descend at 3.30 am, the three lost souls climbed out of the entrance, much to their ire and surprise!!

Another Australian/ New Zealand expedition in January 1978 descended Greenlink again and Keith dived the sump with breathing apparatus. The sump was only 10m long and 2m deep, emerging into free space at the top of a 30m pitch. This would make Greenlink within metres of a N.Z. depth record - and considering the resurgence is 500-600m below the Greenlink entrance, the prospects are very encouraging.

Thursday, 24th February

The end of Greenlink also signalled the end of caving - the day was spent drying ourselves and our caving gear at Takaka; and catching up on some sleep.

Friday, 25th February

The trip officially ended with a party and a day canoeing around Nelson.

THE AFTERMATH

Neil stayed on in N.Z. rockclimbing with Rob, Keith and Geoff whilst Randall flew back to work. Kitty also departed back to Christchurch for a more sedate life with her family. The authors would sincerely like to thank Keith for putting up all us rowdy cavers in his house for weeks on end, and the warm hospitality we received from the Nelson caving fraternity.

All in all the trip was a wonderful success. We had bottomed the deepest and hardest caves in N.Z. - Harwoods and Greenlink. In addition, we had found and surveyed three major caves on Mt Arthur - Magic Roundabout (160m), Guinnevers Hole (Length 260m, depth 55m) and Tryclops Cavern (110m). This experience stands in good stead for future exploration in wilder areas such as New Guinea.

However, regardless of any justification and achievements, the most important fact is WE HAD A GOOD TIME!

REFERENCES

- James J. "NZSS Exp. edition to the Ellis Karst Field, Mt Arthur Range 1969-70" J.S.S.S. Oct 1970
- James J. & Montgomery N. "NZSS Expedition to the Ellis Karst Field, Mt Arthur Range 1970-71" J.S.S.S. Vol 15 (11)
- Warild A. "New Zealand 1976-77: Trip Report" Spar 63

MAPS & AIRPHOTOS

- NZMS 1: 63,360 COBB S13 Map 4th Edition, Dept Lands and Survey, NZ (Mt Arthur)
- NZMS 1: 63,360 TAKAKA S8 Map 3rd Edition Dept Lands and Survey, NZ, (Takaka)
- Air Force 3 Survey Airphotos No 19,20 Run I Nth/Sth June 1963 Alt. 40,000ft Lens: f:5
Scale 100chains/inch (Mt Arthur)
- (Large and small scale photos are held by Randall King anyone require them.)

FUTURE EVENTS

- April 29th - 30th BUNGONIA with a youth-group party (you have been warned !) contact: Mike Walker 692-2931 (w)
- May 4th
Thursday SUSS MEETING - 7.30 pm, Gladys Marks Room, Manning House. (If you are early, look for us in the Manning Bar immediately below). Talk by Glenn Campbell on the Nullarbor.
- May 5th - 14th JENOLAN - includes 2 weekends, so come to Jenolan on one or both of these if you can't manage a week off. Contact: Peter Campbell 76-8855
- May 22nd
Monday SUSS Committee Meeting - place to be arranged.
- June 1st
Thursday SUSS MEETING 7.30 pm in the Gladys Marks Room, Manning House.
- July 7th -
Sept. 10th ATEA 78 expedition to Papua New Guinea. You know all about this already (or if you don't, and seriously want to come, get in touch with a committee member immediately !)

REMEMBER - If you want to go caving and there isn't a trip listed - get in touch with a trip leader (list in the last Bulletin). They are usually amenable to persuasion.

Lumen in Tenebris



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APRIL 1978

SUSS

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SPELEOLOGICAL SOCIETY

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