

OU Cave Club

1986 Exped

Top Camp Log

Thursday 10/7/86

Day Two of Base Conjurao.

[Day one devoted to Carrys up by
 Fred, Phil, Mel, Steve, Neil, Dan, John, John,
 Mike, Paul, Dev, Roy, Martin
 Totally shatter, despite our early start
 up. Started at 9:00, and took till 2pm
 to get here by the Airo cat-across route.
 Foggy at base but clearing sunshine up above
 2000 m meant that some people found their
 legs didn't work. Possibly their caution, and
 the ferry - the luxury cash for Sante...
 had some thing to do with it.
 John, C. & Roy stayed overnight.]

Day two started with negative walk
 up lead by Fred. So MEGA was it, taking
 longer than the Airo route + making everyone
 but Fred + Martin totally + utterly + especially
 FITTED. Fred + Martin of course went straight
 back down for a second carry.

Steve, Mel + Roy rigged in Ridge
 Phil, Mike + John C. rigged in FRO

* * * THE RIDGE CAVE STORY * * *

We had left our kit at the entrance, by Steve
 as the mega-ite-walk up ended up so high
 that we descended to Ridge.
 Then.....

We took quite a lot sub owing to recollection of pitch length rather than total rope length, was all a bit short. As a result, ropes intended for Borborzumi ended up being used higher up. Got as far as rigging rope down no-nose 20m to Numb Canal, in a leisurely 5½ hour trip.

What is done there:

Entrance. 120m, 60m rope
 Bottom of Axolotl. 15m rope
 Top of 20m. 25' ladder, 25m rope,
 lots of rigging gear, but only 1 R.P.

What needs doing.

Rig to Big Belugas ...

- Alright
- 1) longer rope (20m true) or 1st pitch.
 (Free 15m rope labelled as 20m)
 - 2) Shute rope (10m) as traverse line to D.I.D. (Free 15m rope)
 - 3) Short rope for Axolotl
 Short rope for swing pitch (15m, 10')
 Bolt for swing pitch.
 (Free 35m rope)

Carrying the 60m in should do Borbs I-II,
 with the ladder - the 15m for (1)
 will do Borb III. The 35m for (2)
 will do weather Station!

¡¡ Hey Presto!!

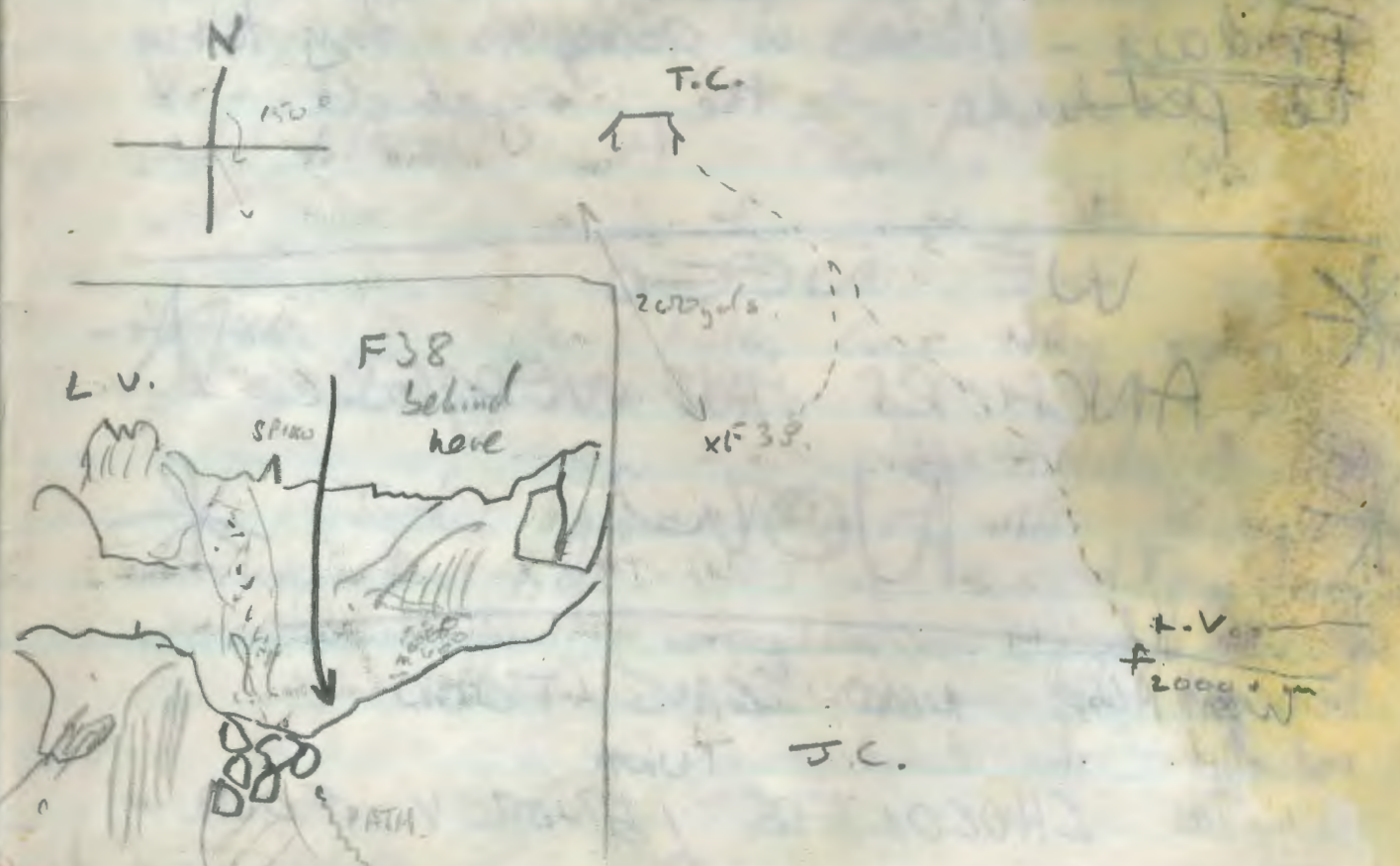
Had a nice day.

Everyone get stuck in the Axelott in the way out + I did D.D. in 6'30" so there (OK. not very good but I was knocked from track.)

Cleary
Steve

For Paul, so he doesn't have to show anyone else THE LOCATION of TOP CAMP WATER SUPPLY (F38)

Take path up to La Verdellunga. Turn right at 1st "dolin". Note largish snowfield. F38 located at top of snowfield. It unsure character. Features are the column (see slideshow) + ice cover. Good crop may or may not be present.



F. 20 Thursday.

The lone ranger rides again with Tonto getting deeper every year as the Ivory tower snow pillar slowly melts. The rigs for L.R and Tonto are the same as in previous but the eyehole is now about fifty feet above the top of the much diminished ivory tower. We went right to the bottom of the shaft and had a poke around. There seemed to be a way on which ought to take us into the adjacent shaft (full of mailows) but a ^{after} quick look down there we found the way on blocked so we came out.

Friday - Mike is going to try to rig the pendule to the eyehole.

* WE NEED *
 * ANCHORS AND WEDGES. *
 * NOW. *
 *

WE ALSO NEED CAVE FOOD

TUNA
 i.e. CHOCOLATE + ENERGY FOOD.

MANDARIN ORANGES ALONE ARE NOT ENOUGH

FRIDAY 11/7/86

STEVE + MEL → Ridge. Enough gear
to get us to a ridge of Barney rubble. Setting
off about 10:30.

MIKE + J.C. to FLO, see

We will probably stay over & go down tomorrow

We need scrubber for washing up
RUBBER BAGS

AND A PEN!

11/7/86

The Ridge Cave Story again

Steve + Mel + I

Took gear to ridge to Barney rubble
(conclusive) BOT - those were page very wet
- continued next morning & over page)

12/7/86

6

Ridge Cave - current situation.
- Rigger as far as Weather Station, down
which there is a rope. The rig is awful (hence
our non-descent) but there seems little alternative
than a tape round a small sharp lump of
choss unless you put a bolt in. We had
only 3 anchors and had used them by ~~then~~
here.

- Tackle in cave:

at entrance. - 120 m rope. Should do Fred Flutcha
← Pitch into D.B.

at Weather Station. 2 x 20 m rope. (one is only abt 15!)
1 x 15 m rope
1 x 40 m rope.

One or two tapes, wires (medium/long).
Lots of mailons, hangers & krabs.

So with what is there you should be able to
rig into D.B.

You will need more wires, tapes, ~~bolts~~
Anchors - Wedges!

There is a bolt kit & a carbide clamp
at the bouldery ledge for Barb. III. We tried
to put a new bolt in for the ladder to
replace Richard's abortia, but lost our last
wedge. The hole is there if you want to use

It.

Re-rigging this needs doing:

- Head of Bororygmic (Carnaby tape + wire). This is a lot safer than it looks, but some form of Y-seley would be best. The pitch needs a relay or deviation 1/2 way down, as it ends on a ledge.
- Borb III - ladder is ~ 6 feet short. The longest ladders we have should just reach, or take a v-short one to add to the end.

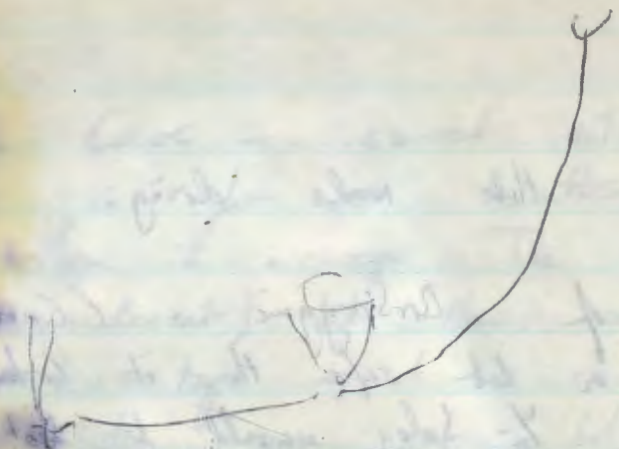
Ideally, D.D. could be re-rigged with a relay about 10 feet down. The top slay could be inside the end of the rift instead of round the corner. This would make the take-off (avoid 'sporting') but would avoid the need for rope protectors.

~~see~~ The top ***

12/2/86 F20

Mike + Neil got through the eyehole. 2 relays on long wires badly rigged, probably need removing, certainly need tidying up. Clear down there: 2 tape slings @ top of tonto, 30m rope + some mailons + knobs + wire at eyehole, big rope + some rigging gear + tlb at bottom of snow plug. Wants re-rigging on Marlow straight to eyehole! Mike

(9)



If it gets sunny — could
 someone spread my gear out to
 dry? It's by the cañon.
 Ta. Steve.

11th July F20 Mk. I Fred & Paul.
 Arrived with nonstrous 200m of marlow we
 got off down. One Tonto new rebelay No. 1
 + wimped out due to general **BUBADIT WIGGAGE!**
 (wire running block (3" x 3" x 2") and other factors.
 Fred then we down carrying the end of the
 Marlow. Once he was down to the eyehole
 I let all the slack rope down and waited
 until I got v. cold then triggered off
 3 1/2 hrs.

F20 MK II Fred, Dan, Martin.
 I left all the rope at the eyehole and
 went on after Paul. As I got back to Top
 camp Dan and Martin were just about
 to set off down, so I decided to go with
 them. Had a cup of coffee, got to 1052 on
 the way to the cave and found a new

leave on the ridge at 282° from Top Camp.
 I went to the traverse that required the
 pitch at the top with the mauls. I then went
 down and did the same at the other side. Due
 to the weight of rope my bobbin would not function
 properly, i.e. it sat upside down which meant that
 I had to wrap the rope around my leg as I
 was facilitated by raising the knee, stopping by straightening
 the leg. I proceeded down the big pitch in this
 manner to the traverse and tried pulling myself
 across but with the rope weight this proved too
 much. With a great well noise (heard at the top
 of the pitch) I shot across the shaft, this was
 fun I thought. Then the rope became intertwined
 from my leg and descent started rapidly, this
 produced the effect of wheel skid! When I
 stopped, sliding on the rope that was caught
 in the eyehole I perched across to the
 eyehole and climbed up the last five feet or so.

Followed Martin to the eyehole & then spent
 hours untangling various ropes whilst Martin had
 made attempts at rigging but full of mauls

Short wire needed

Bottomed but full of mauls & then resounded
 after mandarin stop. Great into A Spanish canyon

Tried to rig first Full of Mauls. What a
 bummer! We decided to go out and cure back
 tomorrow with some short wires.

(10)
Neil & Dave Ridge Cave Rigging Trip.

Rigged very slowly to the top of Fred Flintstone, before running short of gear.

Gear needed down the cave: hangers, mailbags, tapes, short & medium wires & ladders for the pitches in the Big Crunch. Also the weather station pitch has a slight rub which needs sorting on Barney Rubble. The wire needs replacing with a photo one so it isn't doubled.

ROUTINE DRY

IF {Inclemency > nice and sunny} THEN

(PLEASE) Put my gear in INGLESPOT Bag (THANKS)

ENITUOR (MIKE) ^{ALCOOL OR phuck.}

If anything has removed something from my bag (in the evening Suppliers bag), please put it back

Thanks Ray

arrives from Los Lagos at 8pm, 3 1/2 hours walk, totally drained of energy - 2 hours to the top of the X-valley, was as if a tap had been opened, draining all the energy from my legs. Only kept going by the knowledge that it wasn't far.

PLEASE WRITE IN THE LOG BOOK
YOU HAVE GONE TO DO,
ALAN + INTENT.

Otherwise people who come up
what's going on. The log books should be
of day-to-day information.

Steve

we need some ^{well more} salt + pepper he
+ ladders

13th July

F20 - Martin, Fred, Dan

Still with no short wires we
F20 to rig the pendule. We took
so that Dan + Fred could rig in, which
to the scowling to recover the
left there. This one I rejoined the
The top of the "pendule" is rigged
rather than a tape and a short wire
being this as they pass through?

Once again the first ladder pitch is
for the ladder so could a ladder (short) be
the end of this. We then went on
rawhide. There is a - bourse line down to the
pitch head which is rigged as a long wire. We
stopped at the bottom of rawhide since the next
pitch needs a ladder or I!

Gear Down There

F20

- 11 anchors + wedges
- length
- 1
- 7
- 2x30m (limit rigging) + 110m (at eye level)
- protectors 1 or 2
- rough for 1 more trip. (no dicks protector)

lock up Fred.

down pendule pitch until I got
 I thought the pendule was
 going across to a narrow sloping
 the opposite side of the shaft.
 at the climb round the shaft.
 I must have been younger and
 thought to myself, as I
 the horrendous traverse
 to tie on the tackle bag
 a bear pendulum with to a
 let out enough slack for
 use. I climbed gingerly across,
 but I was in the wrong place
 to climb up, but realised how
 make it to the right place

swing back and tried going down.
 I climbed across to an unfamiliar ledge
 which had an old hole tin on it.
 must be below the right ledge. I thought
 at the ledge but the next day

the next pitch. "Oh Sod it!" we can go from here. "Rope free!" The trouble was that the rope from the bag still tied onto a head above me was snagged, and there wasn't really enough rope to rig the penance. I changed my mind and saw Ben back up the rope. I pushed up, freed the rope and went up some more still looking for the proper way on. "There must have been a rockfall or something". I cycled down and decided to go down as low as I could. Suddenly I saw a familiar way across. I climbed easily round, and found I was on the right ledge. I had also been told that ledge - before, the one with the can on, but had approached it from a different angle.

What needs to be done.

- i) Ring the long wire on fish hill at main level with a short wire.
- ii) Replace rope at top of penance pitch with a wire
- iii) lengthen penance or penance pitch with rope from the bottom

10115.
14/7/86.

Martin has got the scissors

Nice sunny day as we all set about mending our seats. It has to be done quickly as Martin, on being asked to lead the glue, started the

[10/24 Dan has now got the scissors]

due to the length of the campsite, whereupon it exploded, showering glue all over Dan's shirt and hat, and denting the lid so that it will not commit fit. Hence there is 1/2 can of glue to use up if it does not.

[10/27 Martin has the scissors again]

14/9/86

John T. + Steve to ridge to Big Couch

West have taken ~6 ropes, lots of hangars, marillas, + some short/medium wires. Also a 40m climbing rope for Fred to have fun with.

Since there are no ladders here, we will have to take the ladders off at advance! They will have to be replaced later.

BRING UP SOME LADDERS!

We are thus to be a shut simple trip just to get the gear to Big Couch; minimal re-rigging will be done (ie. Fred F. will just still have a rope portalo on it).

[Signature]

14/7/80

3.00pm

Mel about to follow Steve & John into
 Ridge & re-rig the st ladder pitches. Absolutely
 Knackered after taking a 5hr tourist (lots of
 sight-seeing up & down valleys) ~~to~~ trip from
 Base to top camp. Need more ladders as I've
 only brought up the two needed for ridge.
 Taking some wires & mauls in as well as
 2 ladders but nothing else.

Mel

Rigged pitches but ladders on
 need 30' & so both ladders
 too short. Checkable, but show
 it some time.

Mel

15/7/80

Ridge Trip (yesterday) Steve & John T.

Fairly efficient descent to Barry Middle. The
 delay as rigged looks OK to me, and you need
 have more long than short wires, & leave it.
 No real problems rigging F-Flintstone esp. The
 last sit is still a bit of an obstruction,
 but I can see how it might be better
 rigged. (Sit on the big boulder facing out.
 Look up to you right. There is a big 'jug' -
 about 3' long hole. The rope could be attached
 to this & bolted lower down).
 Annoyingly, lashing the end of the 120m rope

down Dino failed to hit the bottom.
We had little option but to tie the remaining rope (15m) to the end; and get involved in the act of the knot changeover. Sorely galling when it is only 6' from the floor!

A quick carbide fiddle & chocolate break ensued, and then we put the other two ladders down. Sorry no ropes in these - I thought there were more short ropes down the cave but they get eaten/buried/vanished by Nest & Dave somehow. The last ladder was not descended.

On the way back up, I went back down. Fixed F as far as the rusty rod on the first bit & put an anchor in. It is level with the knot on the rope protection. Putting an anchor in while swinging on a rope at an overhang is bloody tiring, and a real pain in the bum. Still it went in smoothly - comfortably, despite driving the hole deep, the anchor sticks out ~1mm. Still, this hardly renders it unusable as a much-needed relay. A hanger & bolt will be needed, as the one I brought up (curry!) from the base of the cave lost its bit on the way.

On the way out, John found the system was much more efficient at descending than ascending. Our emergence time kept getting extended from 7-30 to 8 to 9 to --- 11pm! (Unbelievable at 12 noon). Epic pros with the Axolothl. On reaching the 20m above Neck's Cave, I told John it was set a mere 20m. He said "Good, yeah, yeah, goop." to the last pitch then? "No such luck."

We were greeted by Mel, here on the way.

Gen - at head of last ladder pitch:

60m climbing rope
25' ladder.

1btz of maillans, hangers, short/tyres.

3 knots.

3 lay wires, on med-wire.

- at head of Fred the Fleasme

Putty knot, Shute wire, 1 layer with 100 Selt!
(inc. anchors & wedges).

Next team

Pass the end of the 120m rope forward - it is unnecessary as a brack line through the first part of the night. Fred the Fleasme at all can then be rigged all one the one rope down as per usual. Reach. Make use of the anchor (put in to avoid the rock).

Needed:

- Short ropes for the two ladder pitches
- Longer ladders for pitches 1 + 2.
- A loony to do Fred's Tolly.

Steve

(18)
I will not repeat on paper the full strength
of my remarks on Friday that have alone. But
is this a carrying expedition or what?

We have two amazing caves, that have
so far occupied a week to get in, not
even to the limit. Yesterday there were enough
people up here for one trip, and on evening
we find no-one here prepared to go carrying
it. Instead, everyone, save the three up
here, swanned off to Cangas for the
day. THIS IS COMPLETELY RIDICULOUS.

Why the hell aren't there enough people
up here, out of the huge ~~number~~ numbers on
the expedition, to sustain a continuous carrying
effort. Why aren't people bringing up the
appropriate gear?

I am really pissed off. If we want these
caves to go deep, we've got to raise the
enthusiasm to put the hours in, like you act
together QUCC !!

Steve

(Lt. Col. ret.).

Mostly windy night. Sleeping in Dave's tent,
with good flapping noises from outside. I doze
off, and find something round under my feet, "penicillin"
I think, & doze off again. I wake up
 $\frac{1}{2}$ hour later to find the round thing was a
tent pole - and that the tent had collapsed
all apart from the bit above my head.
Escaped to Peter's tent. Dave's has now

been completely brought down, pinned down by
wattles and rocks as the wind continues
to whistle across camp.

15/7/86 (continued) 12 noon. Steve, John, Rel.

no-one has turned up yet.

As we have no ladders (needed for F20) and
as Mel's hit to up by ridge, we have
taken the 100m radar up to 2/6, with
the idea of lobbing it down & having a
look-see.

We've left Dave's tent down as

a) he can rig it better than us.

b) The wind is still quite strong

same day - to just 6.

STILL NOBODY. What the hell is going on?

Now two days down F20, 2 are down ridge
gone missing. I bloody hope some people can
up tonight I'm going down.

2/6

Even being at the end of a 100m
rope, looked at the small bit of sky above,
the black depths below. Thanked god for
the knot in the end of your rope & started
back out? I said. I thought it was
supposed to be only 80m deep!

However, I did rig it from the easiest
hang, right at the top. (I thought this

was how it was done last year.)
One the way up, (noticed a net,
about 60m up --- tway tway. (pranged
to the god of ropes & of caves as I
got close & saw the rope looking furry
at the end. "Come on, come on, the last Ten
to go going to be the one that kills me, is it?"
I went to the funny bit & bashed off a large
glob of spider web.

That new Mantus is fast! 5 bars,
& my glove went through a the rope!

Then we did see shaft ending, or rather
Neil & John did while I searched.

The 100m rope is in the shaft
at for the "OUCC" 80 2/6" mark.
I have say if say, a 30m rope were
rigged to the 'bridge', the 100m would then
reach the bottom. Might need a couple of
anchors using long tapes or wires.

largest straight adzed - punik live done!

Unnamed - just below 2/6. Over ridge part
Ridge cave. Someone should take out some
paint & write OUCC F40(?) etc. Went down
15m shaft only to find lower entrance
with snow plug - this entrance was found by
John when looking for 2/6. Found a tight
crawl which led to a small pitch as proven

by throwing stones through crack. Could not
penetrate but could be hammered out
telling inlet

F26 → Exploded after last one. Dead bearing
off. Goes down about 15m. Choked off
bottom with rocks of snow. Nothing leads anywhere
but at least nice of cad.

Mej

gear for F20

- | | |
|--------------------------|------------------|
| <u>In cave,</u> | <u>To go</u> |
| 1 x 110m rope | short ladders |
| 2 x 30m ropes (P20, P28) | 2 ladders |
| 7 hangers | 1 30m rope |
| 1 tape | 3 x 20m ropes |
| 2 Rope protectors | ladder |
| Bolting bits | 4 wires, 2 sp |
| | 5 Tapes & mallet |

Wednesday July 16th

This is who is doing what where:

RIDGE

Climbing: Mike & Fred

Gear carrying: Dave & Neil

Follow-up & probing?: Paul C. & Steve M.

BUGGERING OFF DOWN THE HILL

Johnny Tombs

F20

Rigging: Phil, Ugo, Met, Jonathan C.

Surveying inlet & probing odd holes: Paul B., Roy.

the hill and intending to boggle back down
hard. Brought up 25 + 15 + 10m of rope & my
Please don't straw the letter all over the place.
having set out gum at record speed
top of Sed 2 - I never made it (that
y pack at the end of last year's Expedition)
finding myself utterly knackered & side
vino??). Spent a full hour asleep in
sun in the Vega de Aliseda before I
to attempt the final bit. Argh.

*

Ha!

RYANG will be done PROFESSIONALLY &
equipment by a surveying & geodesy student,
per, from Munich during the second half
Roy, so DON'T BOTHER ABOUT IT NOW.

*

role from the Base Camp Expedition Blown
Two views per card: Serra Conjurtao Ridge Cave Entrance
ing in the Dark. Your personal way of explaining your
as back home where you've boggled off to for 3/4/5/6
weeks (tick appropriate)! 60 ptas each, strictly limited editions,
offer only white stock cards - maximum purchase three by
any one Expedition member (including myself).

Best Regards from the Gannin Brand's Chief Wombat



YAWN MOAN YAWN

but ~~not~~ to be here again

Edward

Gerry Court
handwriting

Wed 16 July 6^{pm} Gerhard back off to Lager, intending to pop in the way. Whoever is keen on seeing Culter tomorrow (morning?) please contact Franzjörg about it. Somebody whereabouts would be welcome.

G.

F20: Inlet surveying.

Due to absence of instruments

Grade 5m survey was not a grade 1a survey of passage to a very out was completed. Went down 6 hrs

P.S Using a prop really good idea.

16.07 1900

For the first action-day during my holidays it was a damned hard trip. From base camp with gear into Ridge-cave down to -250 and back to base camp again. Thanks to Martin, who was as hard to be my guide. I took some pictures. And the weather is great! Good luck!

Franzjörg

Nag Nag please write in the base camp log what you have brought up out of the known list so the rest know what to bring. best regards

Martin x x x

16/07/86 - Ridge

Dave H. Neil, Steve M., Paul C

A carrying tackle for the rest of the cave trip. Steve joined Fred & Mike in pushing on from Freds Folly down into the streamway. The rest of us went out. An uneventful exit except for when the belay fell of the lowest häng of Fred Flintstone whilst Paul was prossiking up.

Will someone please re-rig this häng from a hole & get rid of the horrible deviation.

16/7 Ridge

Mike, Fred

Down to re-climb Freds folly - fairly uneventful except for Fred falling off and hanging over had to Mike. Joined by Steve M. who had re-rigged Freds Flintstone (needs another bolt). Successfully rigged down to bottom in Great Belayer.

! Lack of tackle meant the big draughting, v. prom. rag, etc., etc. - shaft down to streamway could not be rigged. 30' ladder rigged up stream & stream reached but not pos. to make progress to bottom & large drop.

! Unfortunately on the way out Fred had a large boulder hit him & he exited at high speed & in great pain to be treated by Paul Cooper (brain surgeon) with luckily only a broken tooth.

F 20 URS, MEL, PHILIP, JONATHAN

We rigged up from Rowhide
 the first ladder pitches (1
 needs a ladder) and on to Blas
 Great entertainment with a
 each. Spent some time
 pitch at the end and had
 a composite belay as I
 long enough wire but
 work ok. Shards and down
 the chamber below for a
 Un rigged the next shot
 a sporting take-off that
 Jonathan causing him
 and squirm in a nervous
 manner. Eventually he g
 I followed. Mel's hand
 here some trouble by the
 we decided to go on
 slow, out at dawn.

FIZIO Rigging Points to note.

- i) Pendule II rope needs to be longer.
- ii) Second ladder pitch (ps) after Row
needs a ladder
- iii) Pitch at the end of blasphemy needs a
long wire to do the rig properly.

Tackle in the cave:
 2 20m ropes 1 30m Rope 1 ladder
 3 tapes 5 mailons, 4 Crabs, 10 hangers 3 tapes
 3 rope protectors

bit more rigging gear and a 10m
the ladder pitch, this tackle
us to the 20m ~~pitch~~ pitch beyond
some and onwards into the unknown!

a very fine classic Picos cave
unfortunate victim of unwarmed
by many of the expedition

The vertical series is among
in the world, with some of
advanced rigging techniques
negotiate it. The night

golly good fun taken in the
spirit, blasphemy not in
praises the modern spelologist
unique challenge. People who

F20 is a bastard and
not giving it due credit.

I like F20 too

SL

I agree totally, F20 IS BRILLIANT
Bachri

18 July 86

Ridge - ~~My~~ Neil + Steve pushing in Ridge

Phil, John, Dave H., Finish Rigging and pushing in F20

Both parties down at about ~~mid~~ one pm.

17-18/7/86. Ridge. Steve^{R.} Dan Roy

This was my first trip down ridge, I what better way to start than to go straight to the bottom & start pushing heart down the extremely pitches at about one, & had a fairly efficient trip down dancing in the dark etc. How the Axle Otte? & down to ~~stony~~ Nucks canal where the stone that hit Fred Eay (plus a few ominous blood signs) ignoring such ones we hurtled on down to Dinogaur beach, very impressive & up & over ~~down~~ to big bunch, more impressive then up & over & down into a rather nasty rift, in which Steve attempted pass right at the bottom in a very tight nasty space. I must admit, I didn't see the bottom of the rift, but judging from the number of 'shits, ~~pass~~ offs etc etc, it wasn't very nice. Finally arrived in big beluga, & began hammering in bolts at the top of a pile of rubble, Steve went down this eventually, & then had under a ~~pile of~~ boulder while we descended the pitch. We then threw stones down the next 'pitch' & listened to them thunder down for about 10 seconds. In the distance the roar of

water could be heard - could this be a 500' pitch
 down to the streamway. I set off down the
 steeply sloping passage to the edge of the 'pitch'.
 A few metres below was another boulder slope
 which I carefully jumped onto. Hundreds of boulders
 crashed on down the 'pitch'. The passage
 continued in ~~similar~~ ^{similar} vein for about 80'
 steep boulder filled passages & steps of 3-4 metres.
 Eventually we arrived at a small chamber with
 a waterfall flowing into it. A second look by
 Steve revealed a passage carrying stream ~~the~~
 water down behind the waterfall.

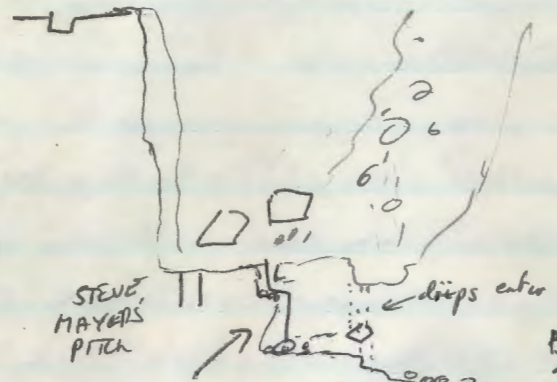
By this time we realized that unless
 we could reascend the cave in under an hour
 this was not going to be the 12 hour trip it was
 meant to be.

The spent along time providing walking,
 fiddling with lamps, eating lunch, mending etc
 more providing, making several weird & wonderful
 mistakes on changeovers on Fred Photos (that was
 me) & the finally at barborogum? providing
 became automatic, & we (1) reached the top
 at about half eight. A nice 20 hour trip.

Gear

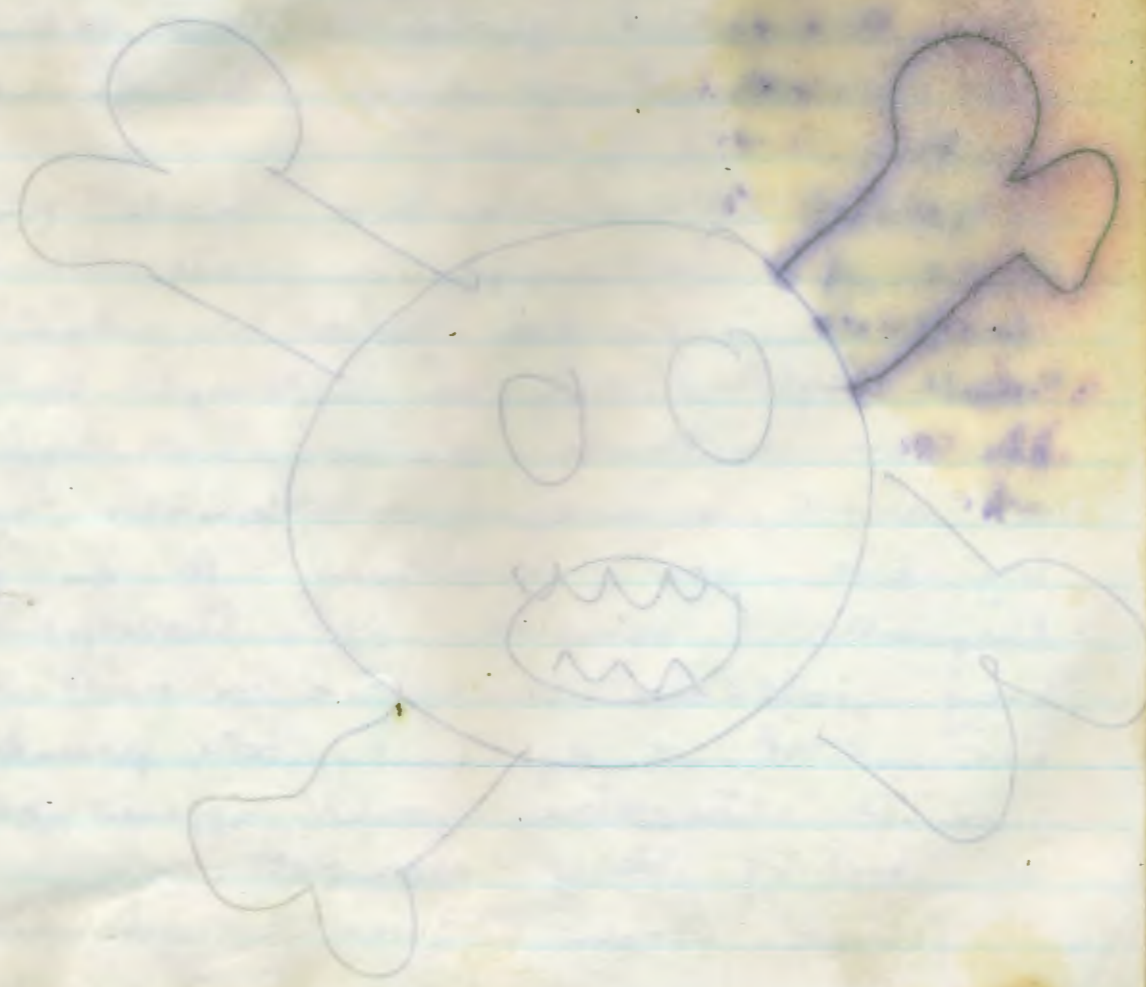
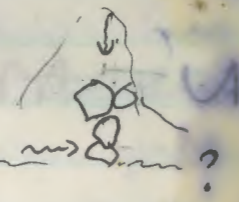
- Down there:-
- A small amount of carbide.
 - Some tapes.
 - Driver plus hammer.
 - A bag & a little of anchors & wedges.
 - A couple of rope protectors, presently
 on rope at Murder alley which desperately needs rigging.

DELUKA
ARAT ~~ARAT~~



Big R.F. fall of South
slope, very
loose
"Thunder Road"

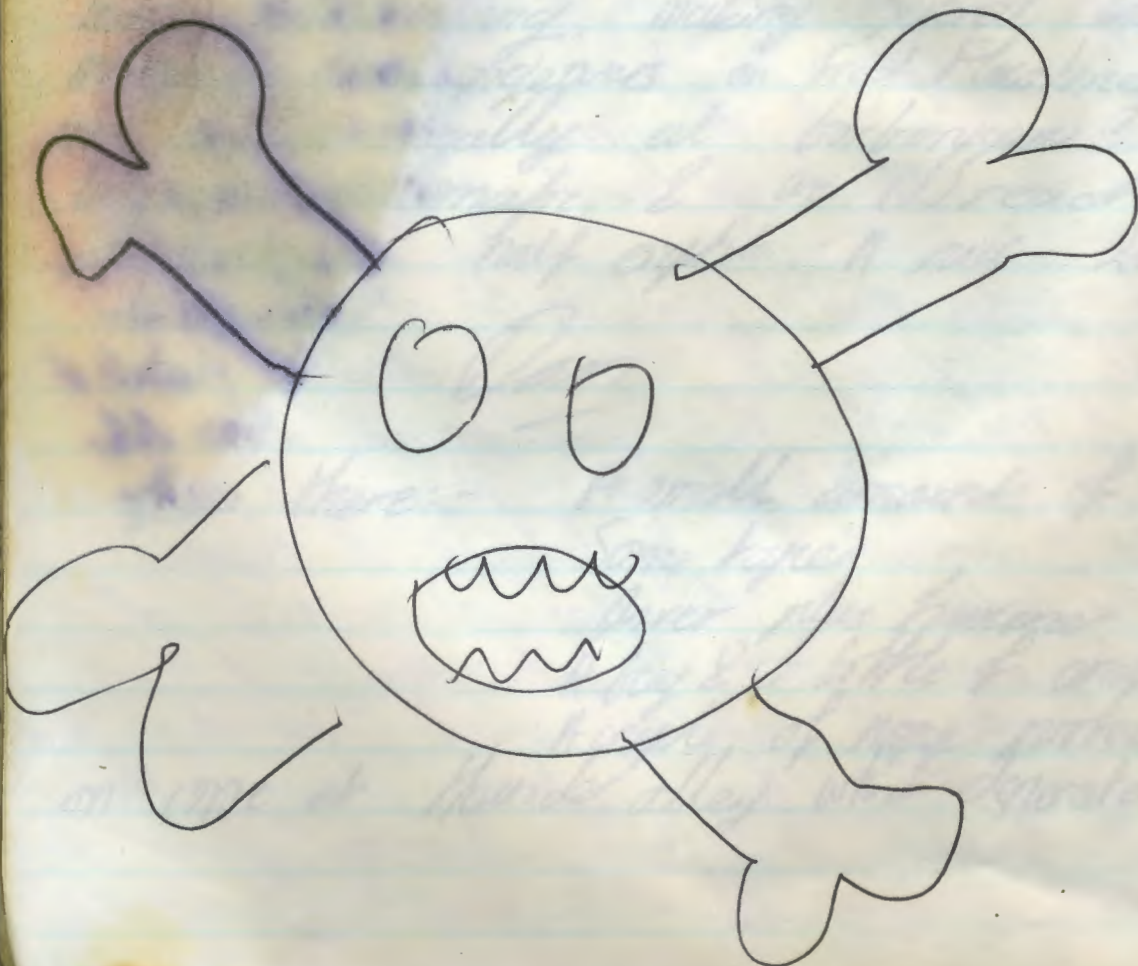
new pitch ~ 15m in
two sits "The Shot-peener"



(20)
DON'T WRITE

THEY ARE

POWERFUL



Faint, mostly illegible handwritten notes at the top of the page.

ON THESE PAGES

J. M. XED.

JU-JU.

Main body of very faint, illegible handwritten text, possibly bleed-through from the reverse side.

(27)
18 July 1986.

Report of the expedition psychiatrist.

I arrived this evening after a stiff but pleasant walk and immediately realized the magnitude of the task ahead. I had, of course, been forewarned by those below at the lakes, but nevertheless the immensity of the difficulties and the intensity of the many and various conditions suffered by those at top camp ~~was~~ dismayed me.

Patient May, whom I had known as a jolly, carefree lad, was clearly in the throes of ~~an~~ impenetrable depression; so much so that he could hardly speak. To my inquiries as to the availability and location of alcohol — which in days of yore would have produced an immediate and positive response — I got only grunts. He knelt, in the classic attitude of the traumatized, gazing without taking in his surroundings at a pile of chopped onions.

Patient Collie was nowhere to be found. Those of her companions still able to form sentences indicated that she had gone "walk about" during an attempt to find new cave entrances. Earlier reports had suggested a severe case of Alzheimer's syndrome; my fears were confirmed. As a preliminary diagnosis, I recalled her description of being forbidden to speak names freely on her toast at age 3 by both parents. That juvenile alienation would appear now to be making itself manifest.

Patient Cooper (J) reacted with anger and

frustration at his own mistakes — failure to fry onions, dropping grit in the stew. I could see he was well on the way to deep psychosis. He wore shorts, despite the low temperature and bitter wind. In this case, there may be no hope, the Duracell batteries being insufficiently powerful to drive the ECT equipment.

Patient Mace was a further cause of concern. He appeared listless and unenthusiastic, claiming that a previous "trip" into an underground cavity of 18 hours duration might be an excuse to feel tired. My impression was that he was taking the classic neurotic path of searching for procrastination and means to defer action. Tomorrow I shall begin questioning him in earnest about his childhood sexuality — I fear an element of necrotation and/or incest may be present.

In general, the group was withdrawn, quiet and uncommunicative, failing to converse with myself or among themselves.

~~There~~ An encounter group and occupational therapy — I have brought up several easy jigsaws — will be only the first step in this arduous task.

The Perils of Cigarette Smoking: Part III in a Series

Mike: "Shall we take a lighter down".

Dave: "No"

Mike: "Oh, why not?"

Dave: "On account of we've got these big flames on our
fifties off heads, like."

Steve M & Neil

on exploration of a last trip. Quickly
at 'Road' and was barred to see the
been rged from the previous trip in right
& loose boulders descent achieved after
bolt to the chamber with the
into it.

followed down a 15m and then 10m pitch

spouting meaning you get totally soaked
stretches & mostly very fine steamway
of passing approx. 4 inlets coming eventually
the inevitable sump.

possibilities for a by-pass most promising are:
passage just above sump.

- ② Climb up into large passage under inlet at the
bottom of Thunder Road (located to 300' by SM)
- ③ Climb up near large area in Great Beluga.

Anyway I think possibilities very high for further
progress if sufficient effort put in.

Exited from cave uneventfully after a 10 hour trip.

19/11/86 Arrive ~ 10^{pm} - oh Fred, Sam, they, ~~and~~ the 35
MYSTERY in Gerhard's rucksack,
Hints it's orange-coloured & dehydrating.
— lovely sunset & singing, Y.

THE FOOD IN THE GIG BILLY IS CONTAMINATED
WITH BREAD — for use by Dave Rose only
There's rice in the ^{pressure cookers} ~~bag~~ on the petrol stove and
stew on the gas cooker.

F20 "Pushing Trip" Martin M. Son. C, Ian

My usual eventual passage down the entrance series, including
turning a conversation to extract myself from a rebelling loop,
getting into a glove but my troll suit and 2 rope protectors
caught in the my net's result in a re-appraisal of the
possibilities of the trip by Ian. Diplomatically, he claimed
to be not yet fit for a long trip and returned to surface
for another day. Out of the kindness of his heart, Martin
put up with me as we made our way down to
almost the limits of exploration except we couldn't find
the last ladder pitch. Left our backline bags at bottom
of Calamity Lane for next party. Marked out a route
through Ernest Riff - go below not too obvious plastic markers.
Needs more markers for better route marking.

The outward journey consisted of me talking asleep
and Martin keeping me in the helmet to wake me up. Emerged
just before seven to see brilliant sunrise; which no-one at
top camp saw cos you were all asleep. Bet your jealous.
Next trip should not need much gear cos there's lots down
there - Calamity Lane - 1x50m, 1x60m, 1x40m, 1x25, 1g

26

1 ladder - 5 ropes, 11 anchors + wedges, 13-14 mauls
+ lots of hammers. Bolt driver

Bottom of entrance series = 50m rope + some food not much
we had breakfast on the way out

P.S. Martin didn't like look of Unlightened bolt on Y-hang
pitch, I never noticed.

S.C.

ON SALE FROM BASE CAMP KITTY NOW:

- gloves "guantes de goma industriales"
- personal tin openers "abrelatas"

check price with Fred, approximately 250 ptas/pair and 15 ptas/bo.
y.

Book on what they found in Ridge (20.7.86):

Paul: High-level fossil passage

Alan: Mike unable to pass squeeze, could see continuing passage
beyond.

Dan: Nothing at the sump, way on in the Big Beluga

Martin: Fossil passage over the top of the sump.

Gerhard: Passage stopping at a "foolhardy climb".

Urs: Nothing.

A drink at the lower bar to the nearest contender.

I am going down to Base heading North first. I may be back this evening. I will bring

- Bread
- Petri
- General Food
- Friends + stuff
- Fruit.

20th July, 1986.

2/6 Gerhard. Ian Doughton.

Ridge. Surveying. Wkg. Paul B. Jan. Out early tomorrow

20 July: Brilliant Sunday afternoon pushing trap in 2/6, having dragged up (supposedly) 200m of Marlow and 4km of PMI. Martin Lavery was extremely helpful with the dragging but abstained from pushing. Enter Ian at 2⁴⁵ pm spider-man fashion, Gerhard hides in the only bit of shadow to be found and drowns off. Sounds of a hammer from way below. At last shout: "Gerhard, come down and bring the other Marlow with you!" (9 pm) Eye in the Sky is going big, and the inadequate rope lengths mean knot changeovers on tiny ledges. (Well, one knot changeover). Another bolt is knocked in while G. does some hypothermia research. At last we stand at the bottom of a large chamber. A little snow. A shimmer of daylight. Straight above us a small patch of blue sky. Next to it a yellow path of reflected sunlight.

Ian kicks 16 tons of pebbles of all sizes down a steep 6m climb and then follows rather more diligently. "Dead Sump!" This

Dovers

(276)

216 so far:

present rigging:

Marlow tied round the secondary tape as primary

to be changed to:

tape round the secondary to save 7m of rope
takeoff has to be simplified (transverse line 10m + 2 bolts?)

rebelay bolt

EYE IN THE SKY I

IN SKY I

35m?

EYE IN THE SKY II

IN SKY II

40m?

end of upper rope attached to sting (pull in to pass the knot on a ledge)

knot

2nd length of Marlow

rebelay 2 bolt on ledge

rub point

bath-ledge

hatchbag with rest of Marlow

snow

EYE IN THE SKY III

Still daylight here!!

chamber

steep loose climb down to stings

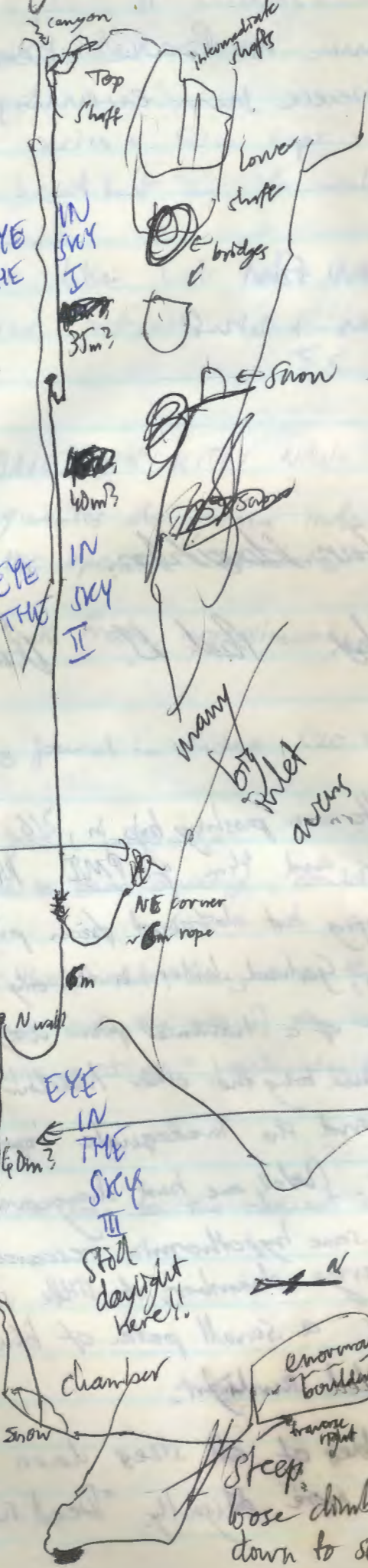
enormous boulder

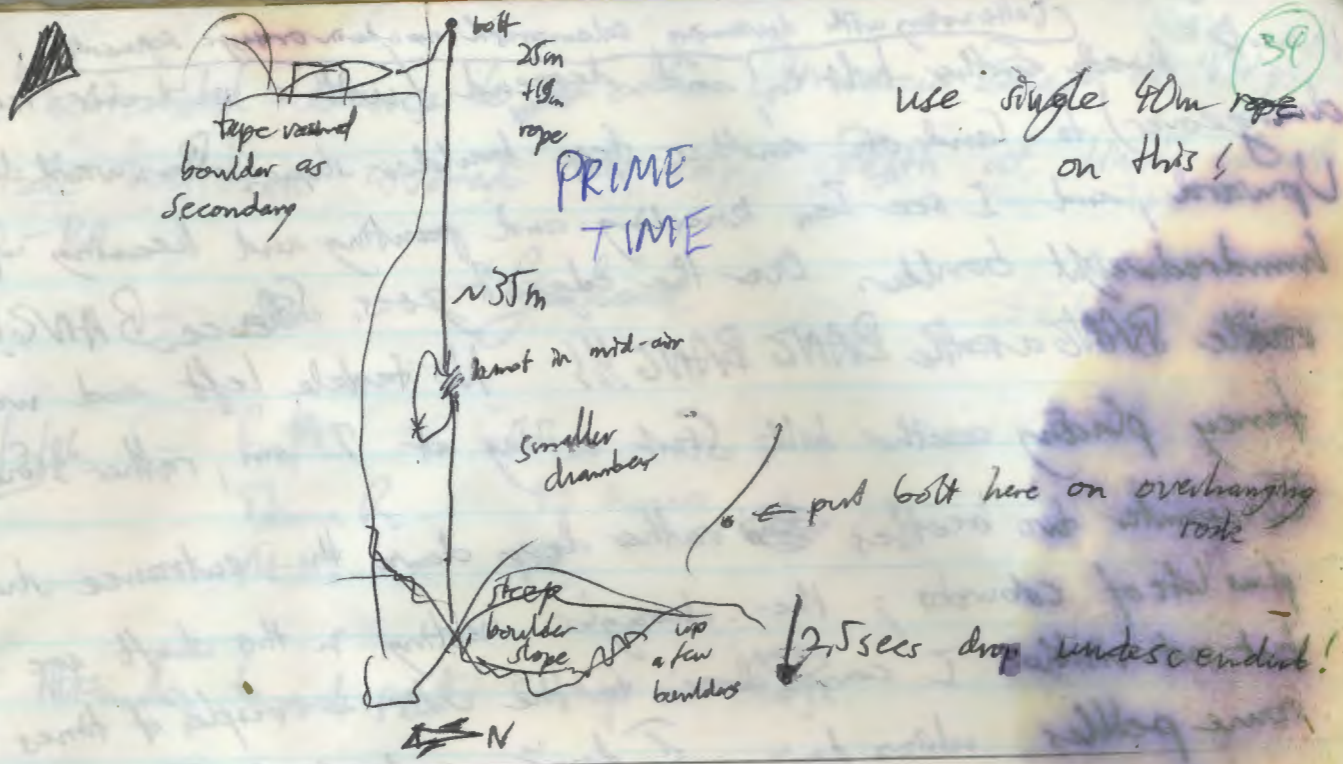
climb up loose boulders left of enormous boulder

undo the "pullover"
take upper rope down to rebelay
use 45m rope for the rest of the entrance shaft

needs protector or another bolt

see over





"Don't think sorry's easily said
 Don't try turning tables instead
 You've taken lots of chances before
 But I'm not gonna give any more
 Believe me
 The Sun in your eyes
 Made some of the lies worth believing."

Chris: "I am the EYE IN THE SKY
 Looking at you
 I can read your mind
 I am the maker of rules
 Dealing with fools
 I can cheat you blind
 And I don't have to see any more
 To know that I can read your mind."

(Alan Parsons Project, Eye in the Sky)

"And it's a PRIME TIME
 Maybe the stars were right
 I had a Premonition
 It's gonna be my turn tonight
 Gonna be my turn tonight"

(Alan Parsons Project,
 Ammonia Avenue)

Down can't be true - and isn't. A short traverse to the right, then up
 more loose boulders past one enormous piece of rock. Ian with a glint
 in his eye lifts the largest pebble he can find and throws it ahead.
 2 seconds - DANG! We tie the 25m & 19m PMI together, jointly

Over ^(Alternating with descending calaveras and orange segments) knock another bolt in, and descend (with a mid-air knot changeover) to land on another steep boulder slope. Downward chokes. Upward, and I see Ian kneeling and panting and heaving up a hundredweight boulder. Over the edge it goes. Silence. BANG! rattle rattle BANG a rattle BANG BANG!! No tackle left and we don't fancy placing another bolts. Start exiting at 7³⁰ pm, rather slowly.

Encounter two beetles ~~at~~ rather deep down the entrance shaft, plus lots of cobwebs; the choughs nesting in the shaft are audible but not visible. I come ^{too} close to the walls a couple of times and some pebbles whizz down. I don't understand Ian's comment on this but gather later that one of them had hit his helmet, luckily leaving no trace. - Out just before gm, Martin Good Man still around, and a brilliant view over the lowlands.

Things to be done:

- Sort out the take-off: 1 or 2 bolts & a 10m traverse line needed. Use none of the Marlow on the secondary, ~~at~~ the end of that rope wants to be a few metres lower down. Rerig the first rebelay accordingly.
- Get rid of the knot, and the pull-over belay. Join the next rope, which wants to be ~5m long at the second rebelay. Take the second length of Marlow down. The last stage needs ~~another~~ ^{some 6m} bolt or a fector ^{down}.
- Hang a 40m rope on PRIME TIME and take the 25m & 19m down. Bolt and push the next pitch...

(You really want to rig the thing from the top shaft - the lower shaft ends on a snow-covered ledge some 30m down.)

The general trend of the horizontal bolts in the chambers is north - i.e. towards Ridge Caves. More than a third of

the horizontal distance to ~~the~~ either Dinosaur Beach or Big 41
Creek. has been covered already. Depth at limit about
150-160m.

Gahard

19-20/7/86.

Paul C

Dave R

Mike

19 hours

Attempted to push past sump in Ridge.

Abseiled down to "Crystal Chamber" at bottom ~~of~~ of
Funder Rock - rather leisurely so far. Climb up ~~through~~
waterfall leads to upper chamber. Way on is low crawl
up short slope at far end of chamber. This leads through
boulder dike to medium sized chamber. At far end
short climb down leads to ~~the~~ pitch down to one end
of large chamber. Climb up loose slope at far
end and then rope climb down in rift to a gallery
in further chamber. 25m pitch of edge drops down
to soulder foot. This is in the roof of a large
fault line collapse rift, at the bottom of which
stream can be heard - maybe now beyond sump?

We used Steve Meyers ropes from pitches in
streamway to rig the 2 pitches. Therefore tackle bag
& gear still at end of streamway.

Came out after meal of ham, tuna, fruit, chocolate
etc... etc.

Ch

IT IS FORBIDDEN TO READ OR WRITE IN THIS LOG UNLST MAUNG A CRAP. IT IS UNHYGENIC!

schmation please take care.

20.7.86

Mike, Dave R. Emerging at 9am took breakfast, a sleep, then tea and oranges. Walked to Aris for ham + eggs, soup, salad, nuts, pears, beer, coffee and many beers. A beerer thing to do on a day after long trip. Julia + Ulas are married (November) + showed pix of Albert, their 5 month old son. This has cured me of powerful erotic obsession with Julia. Walked back with vino for team cooking.

21.7.86

Quoth Ukie: "You never know. This might be the pushing trip of the decade." (To team F20, setting amid dejection.)

My 27th birthday. Setting off for 1/6. (That unadorned pedant S. Gale has painted F30 at the entrance! Coño!) Previous birthday trips were good... finding Put Iron in xitu; the Mekong in FV56; last year Dinosaur Beach... what holds the future beyond the usual deontology and exhaustion? D.R.

A Simple Guide to hog-Book Write-Ups, suitable for the Beginner (with Apologies to Aristotle).

Every write-up has a beginning, a middle and an end, and I intend to deal with these three in order.

Beginning

It is acceptable for this part of the write-up to deal exclusively and at length with events occurring before the actual cave trip. Suitable topics are: a graphic account of exactly why no one got underground before 4.00 pm, including ~~also~~ recollection of the previous night's piss-up; a graphic account of ^{cont. overleaf} how to

Ridge Survey: 21/7/86 Paul, Vkey, Dan 19 hours part 1
Surveyed from top of Hammerhead pitch to the bottom of Thunder Road (17 stations). This way not seen much but Thunder Road was very difficult to do with only one person moving at a time. Took 9 hours to get out. This included getting lost between Hammerhead and the pitches before Fred's Folly. Last year's route is very easy but with no rope we couldn't find it on the way back. It would be nice if someone put a rope on it. It is reached by moving horizontally from P17 to obvious place to climb down. The rope is cut to the core at the top of the weather sta. Can someone pull up the rope and remove this nasty thing. P.B.

P.S. Harde's hurt's

P.P.S. Dan fell 15' down among loose boulders in the Great Beluga. Hazardous business, this surveying.

your vehicle failed to start; a graphic account of the lamentable condition of Roy's headlice. Three pages or so here are appropriate. Caring should on no account be mentioned.

Middle

This is your chance to write down absolutely everything that happened whether it is interesting or not. A parasyntactic sentence structure may be recommended (this means loads & loads of clauses joined together with 'and' and no punctuation).

End

The novice may find that the following phrases prove useful:

- "Out after 20 hours to a beautiful sunrise / sunset / starry night / stew / bottle of Ricard / etc"
- "I hope the next probers have a really brilliant time"
- "A classic trip" (particularly useful if, say, you have just spent 22 hours reading the wrong scale on the clinometer).

A Pitfall for the Unwary

The following style is now generally considered outmoded:

"We all went caring and it was jolly fun / loving and then we all came out again".

Note on Legibility

Your write-up should above all be completely illegible. It is impossible to attach too much importance to this point. The only permissible exception is where words or phrases of unusual significance may appear in capitals, such as "OH! ARGH!" or "DOZY PILLOCK?"

The novice who adheres to these simple principles will find that, with practice, he or she will be able to produce write-ups of a most pleasingly conventional nature.

Have gone down again. Will bring up this evening

- Tomatoes
- Jam
- fruit
- Cave food
- Knives

2/6 - The Trip (Rerigging / Pushing) Jonathan & Paul Cooper, Gerhard

Burdened with twice 50m of Marlow and some more assorted items we set about rerigging the heads. Paul tries to get a bolt in to ease the take off but the rock is too weathered. Eventually we just streamline the existing rig. It is now: long tape round secondary hump, with rope attached to it (can be abbed/purled up if you don't want to climb); 10m PMI round primary hump with a tacklebag underneath as padding and an attachment to prevent it from rotating/slipping off, main rope attached to give a free hang.

The knot changeover has been shifted to the second rebelay, so it's unnoticeable from a practical point of view. The 3rd stage of Eye in the Sky has now a 50m Marlow on it. From counting prusik cycles I'd estimate pitch lengths in this shaft to be 37m, 55m, 33m.

The last stage still rubs and wants a tector or bolts

Prime Time was rerigged with the second 50m Marlow which is also too long for the 35-odd metres.

But I've failed to tell that Paul, upon having had a last look to check the pitchhead, suddenly turned away, green in his face, leaning on the wall, murmuring: "I'm so sick, oh...". Coughing... One out of three persons can't bear the sight of this shaft! We then broke the reflector of his electronics and stayed outside, so it was just JC & I who went down. So we had a good look at the third pitch, took a deep breath, and started bolting it. Absence of a decent natural within reach meant a bolt as a backup, plus another for the main hang. On down on my

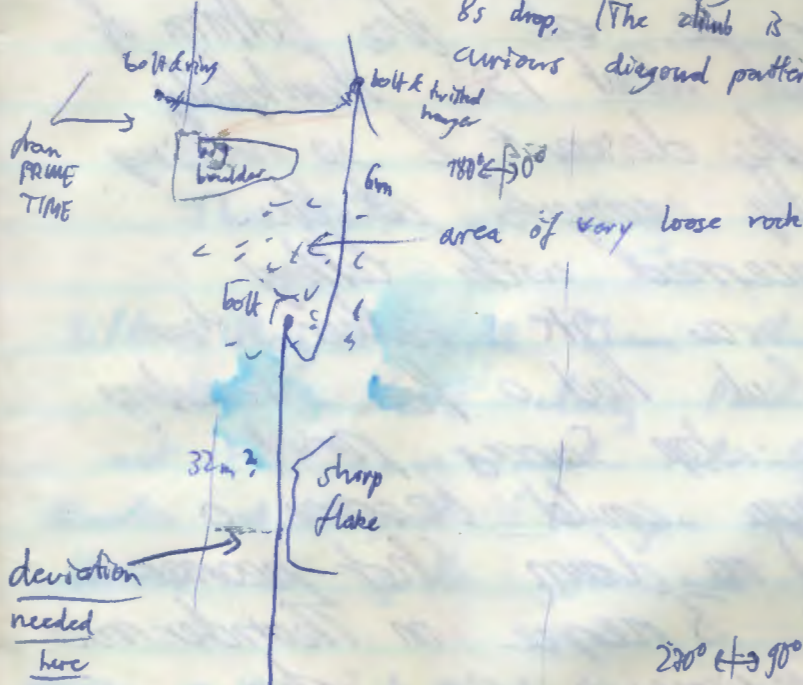
find virgin shaft descent I see the rope beginning to rub. I lock off, take out the hammer and begin tapping the rock. Immediately a rock the size of a water-container falls out and whizzes past my feet. The whole area is extremely crumbly and shattered. Eventually I prusik back up 3 ft and, on a last glance, discover a slightly less dubious ~~the~~ corner. Bolt, rebelay, off down with 100m Marlow to go. I find the new hang misses a long sharp projection by a couple of inches. This wants a deviation (bolt in opposite wall which is 3ft away, sling knots — where are all the club krabs???) because the inevitable penduling of a prusik does make the rope touch this flake. (Suggested name for the pitch: The Blade Runner.) ~~when~~.

The landing is on, guess what? a steep boulder slope which drooves in a chamber if climbed down. Once more, the way on is up the boulders and round a corner to a ^{tall} rift leading off east. This time JC has a go at virgin exploration. A sling (which really ought to be a wire) and a bolt give a nice Y-hang. Far too sophisticated for what follows. We hang the rest of the Marlow down this & JC descends accompanied by the sound of falling rocks. We had tried to garden the area a bit before but there's such an abundance of loose pebbles... JC goes off exploring and some minutes later shouts up "Rope free". Down I go past ledges with more loose rock (ladder would be useful as the lower half of the 15m (?) drop is awkward for prusiking) into a steep boulder floor in the 5ft wide rift. This time the way on is down. Here in the floor — I look down to see my light reflected in a pool 25m below. "This is not the way down", says JC from somewhere above. I climb up & traverse over some large chockstones into a little chamber. Straight ahead the rift continues and offers a decent pitch into the Thing below. However, JC beckons me back round a sharp left bend to a seemingly blind corner. "Go up this climb and look over it," he says. I try to do the 8ft but slip half-way, so I just hurl a pebble over the edge. It goes for 8 seconds,

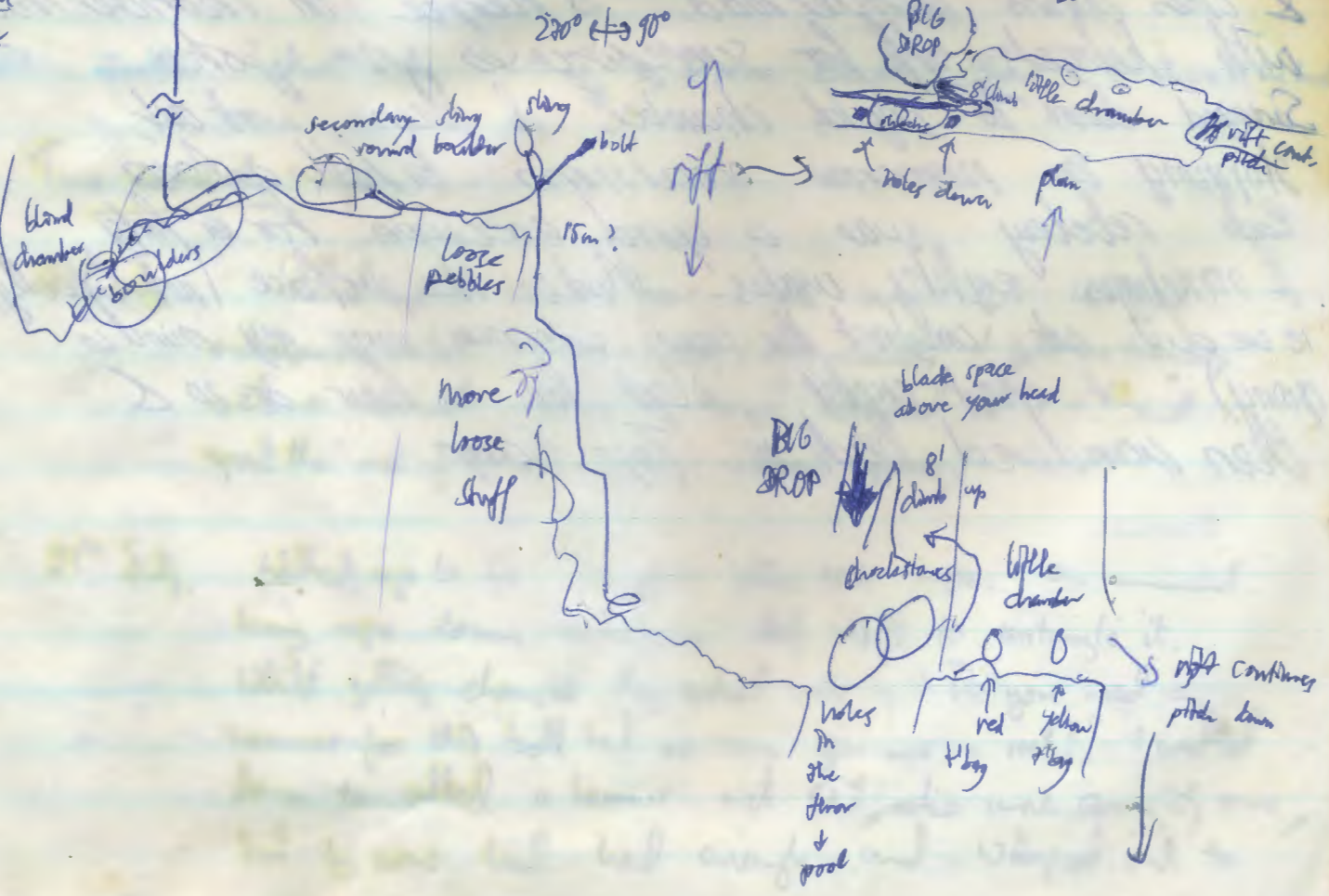
We decide this is too big for us, and start the exit, interrupted by an orgy in the daylight patch at the foot of Eye in the Sky. Out 9:30 - 8 1/2 hours for me.

Tackle left at the entrance, ladder & spreader & maillon

in the chamber: yellow tacklebag containing 8m tape, (0m + 15m PMI pointing to continuation of the rift;
 red tacklebag containing 25m + 19m PMI, pointing to the climb and 8s drop. (The climb is the lefthand one, not the one with the curious diagonal patterns.)



Take spare water down - there ain't more than tiny drips
 Never have more than one person on any one pitch, rebelayed or not.
 Especially the first stages of the entrance shaft is likely to lose things upon anyone on the rope below.



(43)
Sunday 20th July Surveying down Ridge. Uwey, Sam, Paul.

A rather unusual introduction to surveying, first survey point involved me reaching on the ~~and~~ a rock at the top of hammerhead, desperately trying not to knock rocks down on Paul. Survey continued down to Great Big Beluga where I lumbered onto a large pile of boulders which then decided they would rather be at the bottom of Great Beluga. We all fell about 15'; thankfully I was the last to make the descent & so nothing fell on top of me. Oddly enough, at the bottom I was more concerned with letting Uwey & Paul know I was OK rather than seeing if I was OK. Paul had a few interesting slips on way down from Top Survey point. Logging in Great Beluga could become a new cave sport. Surveyed on down Shot runner & then down Thunder road. 3 people on Thunder road with helmets off for surveying is no joke. Surveyed down to crypted chamber, & then went out, stopping on numerous occasions to fall asleep. Each rebelay was a good excuse for a forty & sometimes eighty winks. Made the surface (not literally, ie we did not construct the cave entrance, only my mind is going) at about eight. Slept for an hour or so & then wandered back to Top Camp.

A MESSAGE FOR DAVE MORSELEY (? spelling)

Dear Dave,

since you aren't here and hence are unlikely to come today and my helmet is knackered, and your helmet is a median, I've borrowed it. Should be back tomorrow (Wednesday morning) if you need it. Hope you don't mind. Thanks

Jonathan xxx.

The state of Play. Tuesday 22. July.

2/6 - Roy + 3 Then Phil

Today Paul returns knowing 2/6 is not his cave and retiring for meal at Anacardos. Quote of Exped "Do you need a hammer for this driver or do you use a rock".

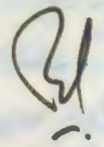
FWO Late start by Urey, Pan and Jon. C (+Dave & helmet)

Two aborted trips

20th July. Walked up to 2/6 in gear. On arrival re-rigged entrance pitch. Immediately afterwards I felt extremely sick & retched violently. Hence returned to T.C. and spent the rest of the day feeling rather queasy

21st July. Walked up to 2/6 in gear plus 100m rope. On arrival hung rope down entrance & shaft to untangle it. Whilst getting changed Roy asked me "Do you need a hammer for this bolt bit or can you use a rock?" I walked down to collect a hammer, met Phil, who was carrying one, but by now had had enough and wimped out to

Camps for a swim and birthday feast.



Monday / Tuesday 21/22 - 7.86.

F20 Pushing Trip. Steve R, Mike, Ian.

Underground at 1pm. Got to the current limit in 4 1/2 hours, well guided by Ian and his plastic poles in Earnest Rift. The 'last' pitch, which Martin could not locate, was easily found by traversing forward beyond the end of Coburn's for rather longer than one would ~~have~~ thought possible necessary.

This pitch lands in the traditional stone roomy bit of rift, with wide traverses up, and the stream disappearing into a slot in the floor. After a food break, we set off up the wide traverse, and then into the rift. Soon, a short 'pitch' presented itself - this was rigged, and descended to a traverse level about 15-20 feet lower. Bored at a couple of corners, it was with enough to descend further, after putting in a bolt string at the rope in. About 25 feet of descent landed us another traverse level. From here, I (Steve) climbed down to the stream.

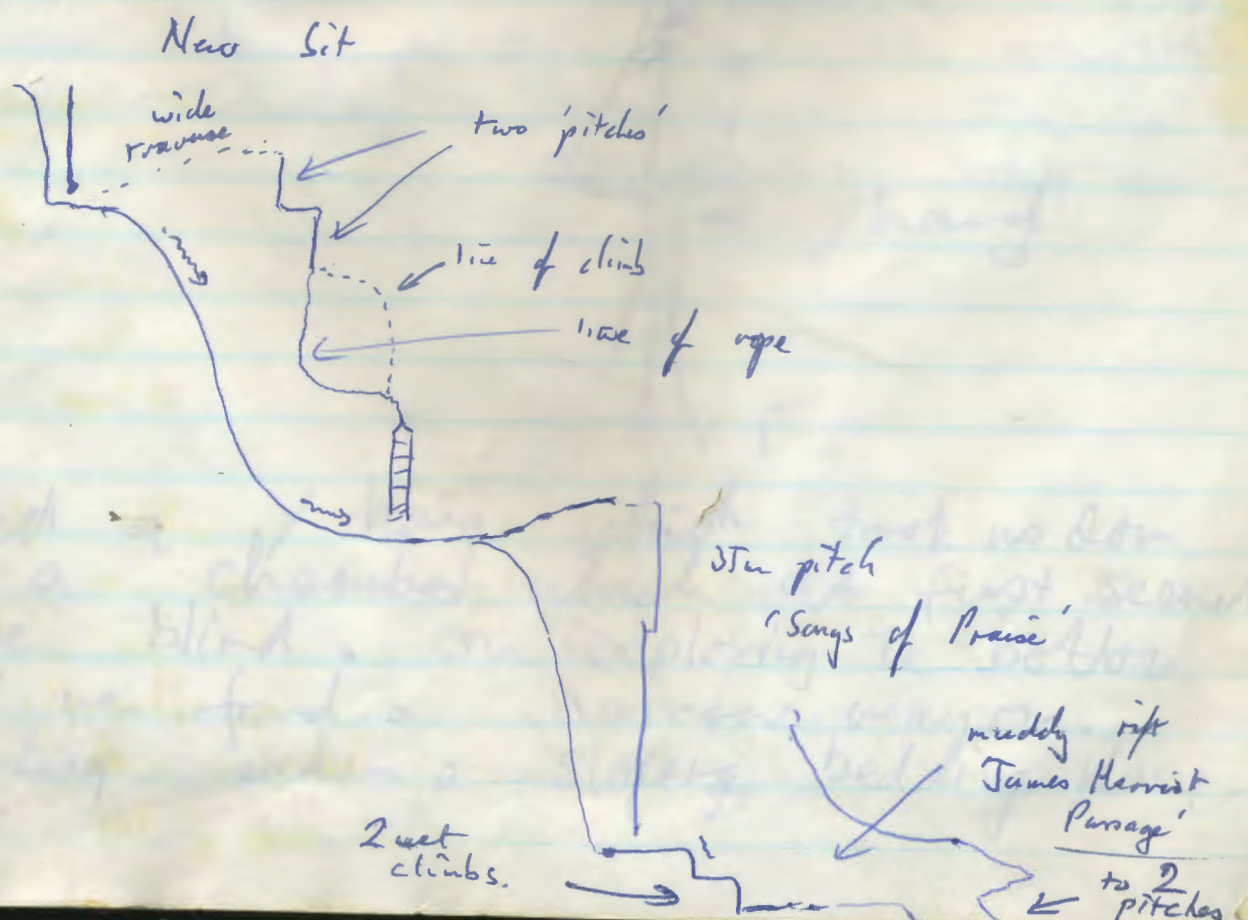
The last 20' of the climb found in bridging precariously across the rift. After my knees had stopped trembling that was the climb back would not be easy. As soon and a half of poor communication followed, as I

tried to persuade Ian to ding a ladder down; aided by Mike, who climbed up & down several times. The ladder is a good thing, though.

Just round the corner from the foot of the ladder, the snow traverse to level led to a side pitch. Mike rigged this, and descended in 35m, wedging to the last obstructive rock, which he could not kick off.

The cave is wide at the foot of the pitch, and the stream quite big. Two Menting-style web droids led to a rift, coated in mud & giving rise to thoughts of sumps. The roof was only 6 feet above our heads. Ian climbed down & found another pitch into more bog stuff. It was now midnight so we went out, with the odd bit of hassle in Blasphemous rift, a truly awful place. My croll kept slipping on the entrance ropes.

Out at 8am to the beginning of a hot day.



We guess abt 70-80 m depth added,
in very little forward distance. Thus the cave
is ~ 360 + 75 = 435 m deep, and still a
long way from Torread Blanca. The stream is cutting
down very steeply. It seems likely that F20
is independent of the known sites of F2/F7.

'James Herriot Parody', because its like being
stuffed up a cow's arse.

'Songs of Praise' - because it's before 'All creatures
great & small'!

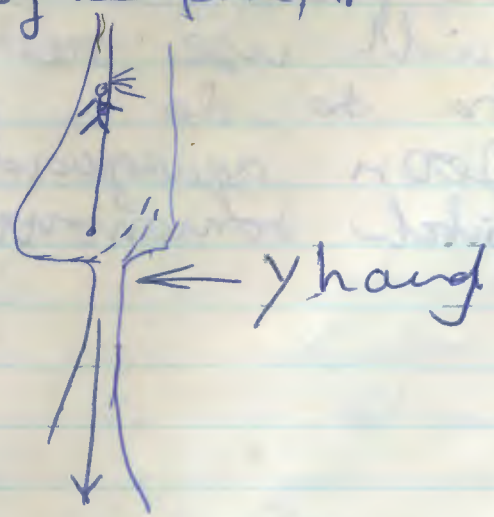
Stew

23/7

They (2-45 pm) Dave & John C. have still not returned
from their trip down F20, starting
at ~ 1-30 yesterday. Well start getting organised
tom. A wet & miserable day.

2/6. Phil D. Ray,

Paul Cooper and Ray set off whilst I jammed myself badly temporarily into the day, the idea of covering being totally abhorrent, managed to avoid the F20 pushover trip and decided to do 2/6 as an "easy option" on leaving, took a bolting kit and met Paul Cooper on his way back to get the bolting hammer and carried on to the cave. Paul decided to give up and go down for a meal so Ray and I decided. We soon reached the limit of vertical rugging and put a bolt in the next pitch. Decided to the top of one meter pitch of the form:



Rigged a Y hang which took us down into a chamber which at first seemed to be blind. On exploring the bottom and we found a narrow way on, crawling under a sloping bedding plane.

leading to a further desperate crawl
 (The Crawl of the wild) which to my
 delight finally yielded a superb
 pitch with 4-5 second free drops,
 boulders making a sword like
 train coming into a London underground
 station as they plummeted to their
 doom. We spent some time lobbing
 rocks off in sheer delight and decided
 a bit further onto a ledge $\approx 5m$
 below. We seemed to be in a massive
 wide rift and the ledge consists of
 jammed boulders. Having run out of
 rope we ate, chucked a few more rocks
 off and went out. At the Y hang I
 investigated the continuation of the
 rift to the left hand side and
 found a possible ~~to~~ crawl by pass.
 We will use the 110m rope from
 tents to do a verig, and then use
 the 200m aquaguard to get down the
 big pitch tomorrow.

P.D.



[Faint, illegible handwriting at the bottom of the page, likely bleed-through from the reverse side.]

Wednesday 23/7/83

Rescue Trip. Phil, Steve, Roy, Neil.

We have taken:

Ford - packet songs - Blue, - bowl
chocolate, Tuna.

Medical - Suture kit, dressings, iodine,
paracodol, feldene.

Casade - 1 BPH container full.

Several survival bags & pallets also.

We have not taken the stretcher or the drip kit.

Leaving at about 6pm.

They are all OK slow due to
light falures etc.

DL

Ridge Cave

21/22 July

This is correct, but out of sequence in log.

Martin M, Steve M, Dave R.

Intended to try to locate the high level route over the top of the "sump".
Went to the limit of high level route dropping down into the chamber. Steve then continued down into the streamway to recover the tackle bags that we left behind. He returned looking very hot & dragging two large tackle bags behind him.

We then went back to the route above the chamber & rigged a traverse across a boulder ledge then dropped a rope over the end to try to find an obvious traverse level. Unfortunately there was no such luck & we were left dangling in space above the stream again, still on the wrong side of the "sump". I thinking I was only away for 15 mins, returned to find Dave & Steve frozen as that I had been off for 2 hrs. We then descended back to the waterfall at the bottom of thunder they, checking other possible routes as we left.

On the return I managed to kick off some boulders at the last pitch on top of flintstone. Be ware of this as it all fell on Steve who is now quite sore.

Martin

F20 Trip 22/23 July

Dan, Johnathon C, Ursula.

Having not been able to write this trip up immediately due to the medical condition "Manns Fuckerlypus" many of the details may have slipped my memory. I Apologise for any mistakes, however if anyone wishes to make a formal complaint, it should be typed on headed notepaper and sent together with a stamped, addressed envelope to my address in college.

Meanwhile the cave trip :- We started at a moderate time of one o'clock, not wishing to embarrass less enthusiastic cavers by setting off earlier. The entrance series was very efficient, and this general efficiency continued up to a pitch between Blaspenny and Ernest where for the 3rd time I got caught on a rock and took an hour to get off.

From now on I was out of order and much to my surprise found my way to the bottom of Calamity with few difficulties. Without too much difficulty the pitch the we and others could not find, appeared at roughly the same height in the rift as the bottom (not the 1st place to get off) of Calamity. Some Footbeat off the Calamity songs of praise, Ukeg, a making and like means when attempting to struggle herself on the sheet climb down where you don't follow the rope.

In some horror passage the first sign of tube problems surfaced, the my outside needing a good poke before working again, splashed along the stream, having pushed our gear into backle bags and found what of exploration, still or like a cow's backside. In rapid as ever I squeezed down the rift in search of the patches which we were informed about. A ladder was fixed to make the ascent easier than as Dan followed I looked for a less tight route through the rift. A dark wide space beckoned and I should also try to find no more rift. Instead a patch whose bottom I could not see

Please leave this page.

53

Pressed against the walls, the way back seemed incredibly hard, so when Dan offered his Donkeys back for support I grabbed it and swung it in a narrower but where I could traverse down. If I'd gone up where the hole was, I probably (50% chance) would have fallen and made life very hard for Dan and Ukey. As it was I was trapped for an hour on a fairly large ledge, adequately supplied with oxygen so bloody cold, whilst the pitch was rigged. My intention the next pitch was rigged it was time to get out, the obvious way on a 30m overhanging I had time. Got off back at about two at night. It took 15-16 hours to get out, for numerous reasons which will be listed.

- My ~~flashlight~~ light my spark generator getting blocked and not being cleared, so had to get lit at someone else ^{whenever} before I set out

- My getting lost in rift before Colman's, and both cables with electric going out.

* - Ukey getting stuck in climb when you don't follow rope.
 - Ukey losing cable generator bottom main rift which Dan found again. Found very long hand straps.

- Ukey's light going between Ernest and Blusphery so had to be guided through rifts.

- My electric battery running out.

* - Ukey lost in wide rift before entrance series, Dan went back along it twice, she had gone up label which Paul surveyed without instruments due to failing light. ^{to no contact lenses}

- 2/3 people going up entrance series with no light.
 * 1 top

I got out at 5.30 and after 5 minutes the rescue party arrived, looking every wonderful - THANK YOU. The other two emerged in the next hour, Ukey with broken hand loops.
 - I want to go down R20 again this expedition, with the rest of the expedition kindly hollow it before I come back

due to mud in contact lenses argh!
 J.C.

24 July

Dave M, Phil D, Roy T.
Surveying trip down 246.

Martin M, Steve M

Trying to find route through Ridge cave
at stream level, have taken survey gear
to use if unsuccessful.

24 July RIDGE CREEK Martin M, Steve M

Intended to go to bottom of Ridge to try
pass-through boulder choke. On the way
down put a bolt in on the pitch into
big beluga so that the majority of
pitch is now clear of the cord. The
hammers & anchors are at the top of
thunder alley slipped into the traverse line.
Have taken the diver to base to put a
new thread on.

Once down into big beluga we rigged
the streamway, at the bottom I remembered
I had left the tape in crystal chamber
so returned. In doing this I noticed that
a very sharp nub point had gone to the core
so replaced the 20m quill with 20 10.5 in
plus rope protector. Unfortunately the rope was
too short so there is a knot danger over at the
bottom of the pitch so rig with a 25m
rope. In the stream we tried pushing the
chore & removing some boulders. This proved
unsuccessful.
On the way out we surveyed through down

the ramp to crystal chamber unfortunately
 we had no idea of where - the last team
 survey station was so someone had to look
 new up. The station in crystal chamber is
 - the wall opposite the river alley and about
 up the wall. There are prominent S's
 on the wall. At the other end the survey station is
 before - the "ramp" on the downstream looking
 left wall, again marked with the S's
 After 20 survey legs we exited the
 feeling very cold but managed to
 up.

let it be known that although the
 was good - it was just one of those

- 1/ left helmet in camp, had to walk back to camp from ridge
- 2/ got totally stuck in rocks and so Steve rescued us
- 3/ left half of hand on wall when putting bolt in
- 4/ left tape and dunks so had to return up wet pitches
- 5/ had to reig wet pitches due to rubbed rope.

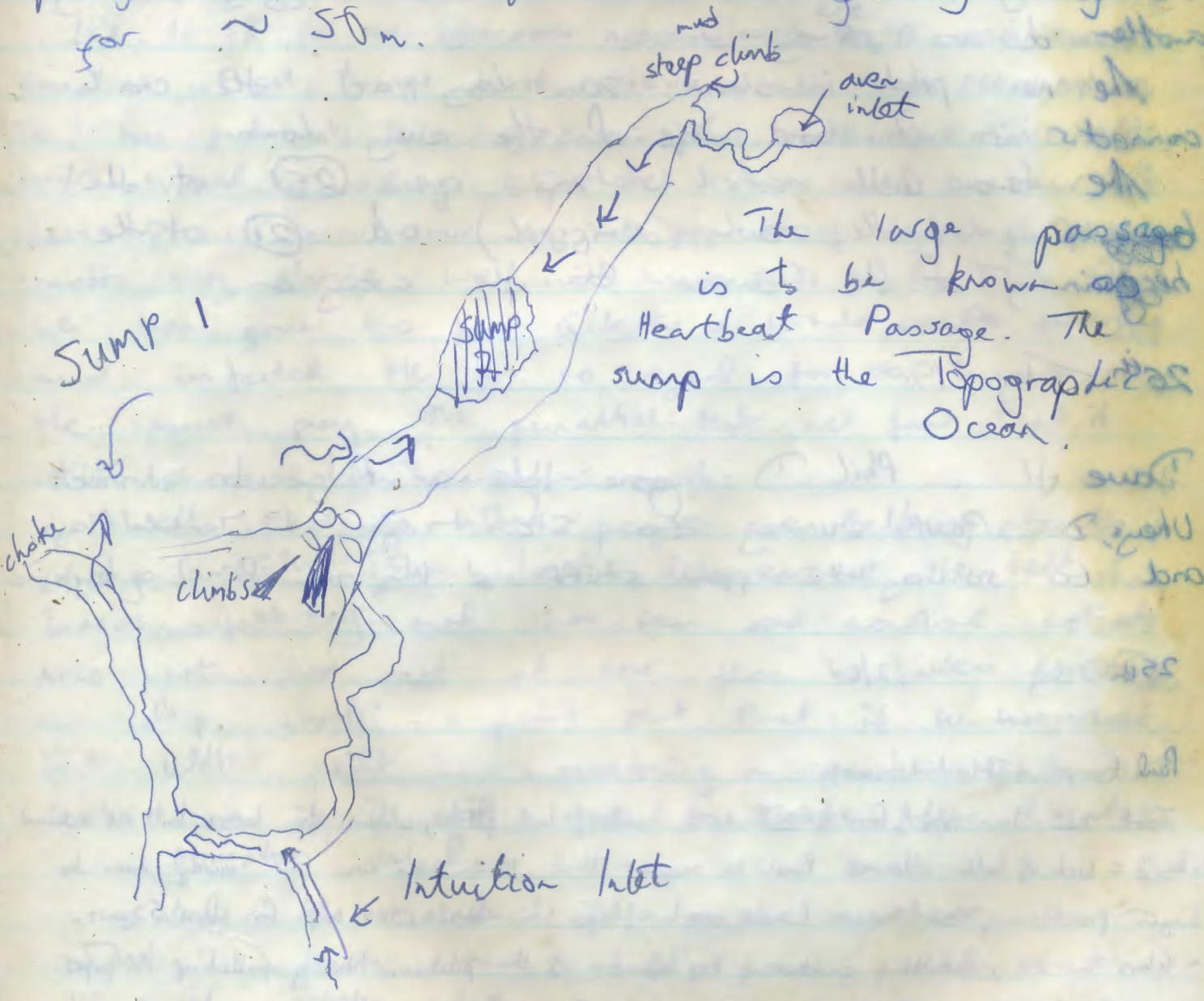
It was quite surprising it was such a
 good trip actually.

Mark

25th July: Paul B. & Graham. Ridge Cave
 16 hours. Pushing.

Got to the bottom reworking one of the
 streamway pitches as we went down. Spent
 a couple of hours hammering and trying
 to insert ourselves into the hole. We got bored
 and so we bugged off to look for a high
 level bypass. We climb up the last inlet

before the sump. About 15m up is a fossil passage off to the left. We followed this down into a large chamber with the stream at the bottom. After a large passage there is a large sump pool but the large passage continues with an inlet flowing along for ~ 50m.



24th July 2/6

Dave H. Phil D. Ray - Surveying a pushing trip

Interesting surveying down the big advance pitch, hanging for hours at all the rebays. The rest of the cave was easy to survey most of the legs being vertical. At the bottom of the pitch rigged with old Marlow

(61)

There is an obvious survey station marked with a cross and an 'S'. The next pitch is gained by traversing around the corner to the left. Originally, the cave continued down a \checkmark long pitch to a tight crawl. We surveyed down to here as well before derigging, leaving another obvious survey station.

The new pitch is about 70m long and the crawl connects into it about $\frac{3}{4}$ of the way down.

The two well marked stations are (25) at the beginning of the crawl (derigged) and (21) at the beginning of the traverse to the way on.

26th July 1980

Dave H. & Phil D gone down Ridge to connect Uhen's, Dave's & Paul's survey to Steve Meyer's & Martin May's and to survey the new stuff a bit to find a bypass

25th July 2/6.

Paul Cooper & Martin Lavery.

Took new 9mm rope, food & outside to head of last pitch, where the loose bolt & awkward takeoff & lack of bolts allowed Paul to suggest that Martin was now fair enough down to begin practising sit stand (sanity at last!) on his first SRT trip for about 5 years. ~ 6 hrs in all, including gardening top of one of the pitches - having pulled up the rope.

Dave Rose, Ian Houghton. 25-6 July. F20 17 1/2 hours

A NIGHT IN AMNESIA

It's 14-38 in the afternoon now. There ^{are} Ricard, sun, tomatoes. First things first: STEVE GALE IS A PSYCHOPATH. He has put 4 1/2 kilos of carcinogenic rhodamine in Orca and turned Covadonga bright red. This could be our last Picos season: ICONA do not approve of dyeing Spain's most holy shrine. We will have this prick. This time he has gone too far. Gale is a fistula, ~~and~~ festering and infected. He has no regard for the human race. He must pay the penalties: but all fear that it will be we who suffer most.

Well. That is what people are talking about, along with John Wilcock's disappearance. The rest of Lagos yesterday and has been seen nowhere: not at Aris, not here, not at base. Has he fallen down a deep shaft? I point out that if he has, there is little point in mounting a search. But that looks as if it will come to that. After I make a tomatoe salad.

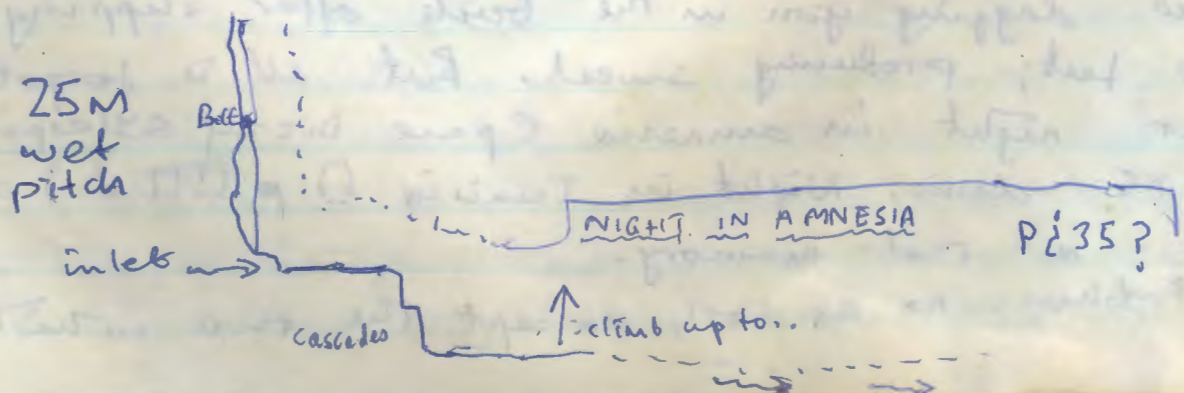
Salads. Ah, salads. Life, on the surface. Last night I know we had no salad, but I recall little else. F20 is a cave. It has an entrance series, then many rifts. They pass: dragging you in the back after slipping a few feet; producing sweat, but all is forgotten. Our night in amnesia (pace Dizzy Gillespie's 1945 classic, Night in Tunisia ~~of p. 111 d~~) is not a real memory.

Problem: no anchors, except the two which

Can had secreted about his person. so we could not do very much. we went down the wet pitch, ignoring the v. poor bolt of the previous team, can using his anchors speedily and judiciously. It was about 25 m, to a big wet chamber with an inlet. Cascades: comfy, exciting: perhaps some roamy streamway to a series of big pitches riggable from naturals? Alas, no. The worst rift yet: tightest, and covered with lacerating crystals. Worse than Hammer Pot. After tearing ^{off} the top off my overcoat it allowed us access to the top of a pitch, below which things looked bigger again.

Here I espied a climb up and after 10 m hit the roof - a ~~to~~ larger, easier tube leading to the top of the same pitch. ∴ needing both. We followed it back to the end of the cascades and ~~to~~ climbed a long way down to the stream - a handline would be useful.

This will be the route to be used. Then exit: many squares of ~~to~~ chocolate, bread, marmalade. Did ~~to~~ the entrance series in 75 minutes. 7 hours out from the bottom - still reasonable for the party free of cork-ups. Got, 600 kcal. There is a lot of rope at the bottom which we could have used. If F20 goes into FU56 I will be astonished.



I've added a further name. The long and
distant passage between Blasphemy and Earnest is
to be known as THE LAND OF SPIKES.

26/7 Quotation of the Day:

Paul "... 'cos it's a scrofulous little hole!" (Cooper)
(Your doctor advises you to avoid F20.)

27/7 ~~Fred~~ Dave "If ever there was a Beam-me-up-Scottie place
its the bottom of F20" Rose

24/7 John Wilcock and Graham ~~Parker~~ ^{Naylor} arrived at Base Camp
from the ferry after traffic jams at Torrelavega and
So Vicente de la Barquera. At Cangas had large shopping trip
after customary visit to the Bar Rio Grande for tortillas and wine.
On the way up in the mist met five coaches coming down all
at the most hair-raising cornice bends with us on the outside -
quite a driving experience with the van. Brought out from Oxford
Graham + kit + remaining food (1 box Marmalades, 3 John West fruit),
+ large box of rope and other gear from Lyon Ladders). This rope
was immediately set upon and transported up to top camp
by Ian, Dave & others, since rope was at a premium. Graham
also went to top camp.
John W.

24/25.7 Found everybody subdued and listless at base camp.
The reasons for this are obvious from reading this log - three
major pots c. 500m in progress, and trips of long duration
and great severity. Also some near disasters - Fred and his
boulder, stitches, X-rays, cut hands, overdue trips and "rescue" trips,
not to mention lack of transport due to the demise of the Yellow

Van — my compliments and respect to you, ladies and gentlemen. Keep up the exploration pressure!

There does seem to have been a long delay from the start of the expedition in laddering (oops — you can see my age showing!), or tackling these pots, however, and there is a notable reluctance to mount trips, especially to F20, until 11am or 12 noon.

On the morning of 25/7 the diving expedition arrived (Danny + Co), but without decompression tables! A visit was made to the upper bar, which was crowded because it was the Fiesta del Pastor in Vega Enol + holy day in Coradonga (the Rhodamine B carcinogenic "Blood of Christ" episode was highly irresponsible, especially since the through connection was already proved). The whole of the Vega de Enol, Eraina and intervening roads were jam-packed with cars and many coaches — most depressing. I walked round lake Enol to the Enol refuge (1961 Expedition Base) for old time's sake and found things much changed. There were no such crowds in 1961 — there was no metalled road above the farms at the second Z-bend out of Coradonga, and no road to the Enol refuge. The large crowds were watching horse races, and there a few, obviously artificial folk groups in traditional dress + bagpipes, and many beer tents. Quite spilt from 1961, when it was a simple feast for the shepherds, who came with their sheep, I played bagpipes, danced and got drunk!

John W.

25/26.7 "A Silver Return" Random meanderings in the Picos — a comedy of errors with a much-travelled pack.

Left 2.30 pm from Lago for a trip to Top Camp. This was my first attempted port direct from Base Camp to Top Camp. All went well until BC3, although it was extremely hot for

and legs were weak due to lack of altitude acclimatisation. Left Arico path near top of BC3 where the Central Massif peaks come into view (later than the approved point at the base of BC3 by the sheepfolds, I now know).

I had remembered from my two previous visits to top camp, albeit from Arico, to "keep high", and keep high I did, ~~but~~ confused El Joon for Torcada Blanca. I soon found myself looking down on the pass at El Joon, the large snowfield / ~~slope~~ slope of which looks remarkably similar to the one behind top camp. Mistaking this for Joes de Pena Blanca I then went lower, expecting to find top camp "just round the corner". As the light faded I pitched camp on a grassy knoll below what I now know to be El Regallon, about 1 km from top camp and 100m lower. Actually I spent a good night, since I had tent, airbed, two sleeping bags (inner & outer), water and iron rations with me. Earlier I had seen two large groups of rebecca, and the night was very still, with half moon and rebecca grazing around my tent later on. I had a superb sleep.

Arising at 7.30 am on the 26th I persisted with my quest for top camp. Believing myself to be east of top camp (the view of La Verdelluenga + spike ~~was~~ was not yet correct) I went west over extremely arduous country. By the time the view of La Verdelluenga + spike became correct, I was on Conjurao ridge ~~was~~, but north of the pots 1/6 and Ridge. There was still no view of top camp (I was too low). Before long it became obvious that the ground was falling away to the north west, obviously wrong, and to compound it all mist descended. Later on it cleared momentarily to give me a surprisingly dramatic view of ~~the~~ Santa ^{Maria de End}, which of course I recognised. I got a compass fix on this before mist descended yet again. I decided that the best plan would be to make for the Arico path and Arico itself, where I guessed I would be looked for. So I descended to Vega las Fuentes (the water was beautifully sweet to my parched throat

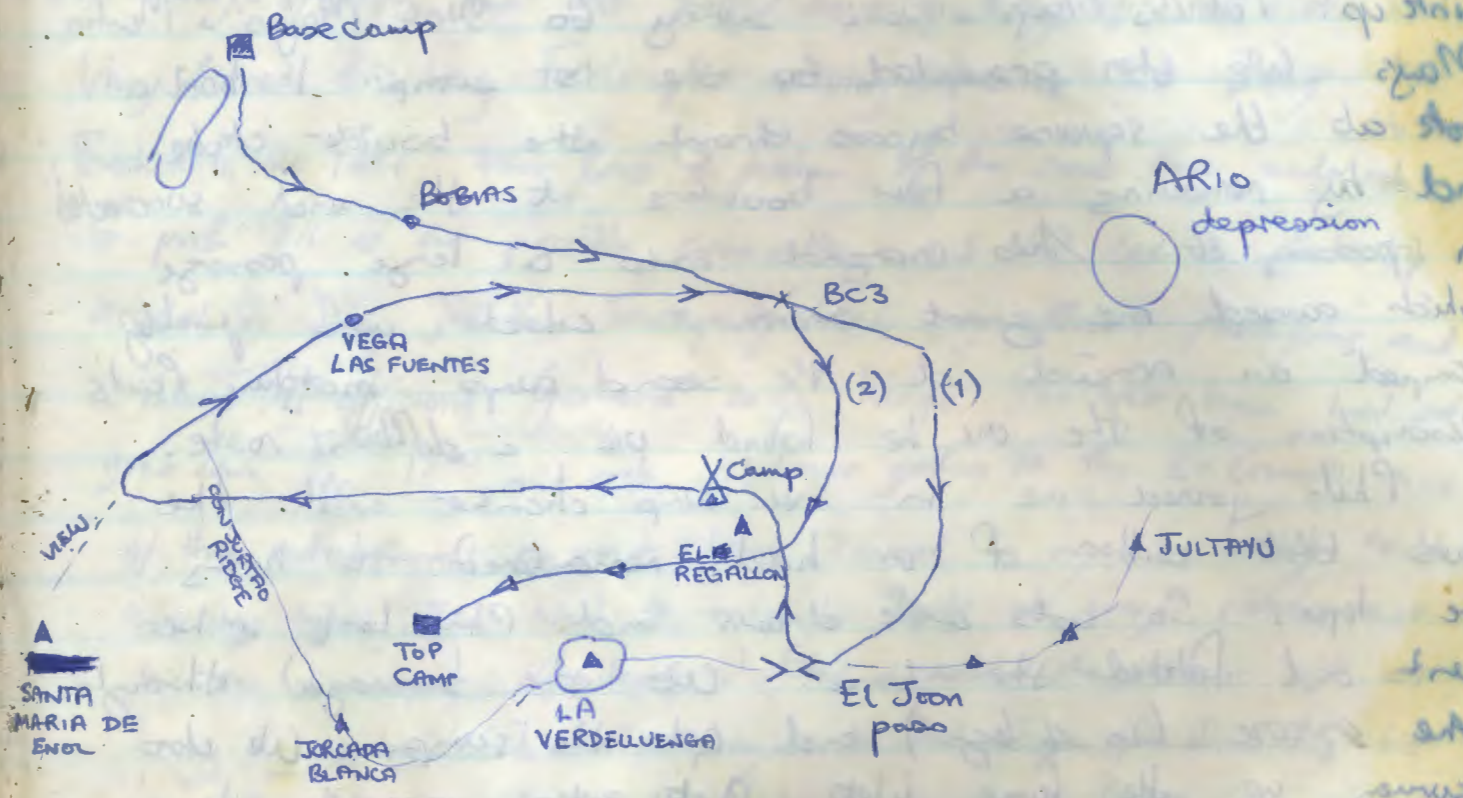
and lips) from where there is an easy track to the base of BC3 on the Aris path. I was sitting there waiting to see if anybody came up or down, when Jonathan C. arrived. He gave me some Tuna, then showed me the first stages of the direct top camp route (a winding gorge up the hill) but then left to contact other members of the expedition. We could see a route from top camp to Aris. Actually I might still have not found top camp, since this was becoming very much like last time round, had not I shouted and been contacted by two other members out looking in Vega Aliseda. Gerhard was very kind in giving me some Bobias water and carrying my pack in the last stages. Bravo, gentlemen, and thanks for putting up with my inadequacies. It could so easily have been worse. Top camp was like an ~~oasis~~ ^{so} in the stony wastes. What a way to treat a pair of boots, and I am not 24 any longer!

The lesson (moral) to be learnt from this exercise is that everybody not completely sure of the route to top camp must be accompanied by somebody who does, even in good weather conditions. Unaccompanied persons could easily break a leg, or worse fall down a pot, and nobody would be any the wiser.

This was a record 30 hour trip Base to Top Camp (excluding Ukey's 3 day effort).

Approximate map of John's tour of the Picos (estimated at 25 Km) plus pack:

(Not to scale)



Well, I hope you all have a good laugh! I saw many shafts en route (wish I could remember exactly where they were), rebecca, millenkarron and kamentzas of supobe forms, etc. I also know much more about the topography of the top camp area! PS the German 1938 map of the Picos is awful and the Xeroxed one not much better.
John

27/7 Take note — food tent has now been cleaned out and reorganised. Lets hope it stays that way for a while!

VEG.	MORN FLAKES
POST EIN	BREAD
CAVE FOODS	DRINKS & MILK
	PASTA/CHICKEN/RICE/SOUPS & PLANTAINS

✓ FIRST AID KIT

Bag rolls have all been moved to green tent near bog path — more convenient & more hygienic.

John

First Sequel (by Gerhard)

On Sunday afternoon the last Ridge Cave pushing trip set out: Ukey & Fred, this being Fred's first caving trip since his Being Bashed In Me Face, Dave Rose & Graham at the same time undertook to push 2/6 to the possible connection, and Neil led a photo-trip assisted by Dan, Jonathan Tomlin, Gerhard's very efficient flashguns and a rather less efficient Gerhard down Ridge. The latter team had ~~set~~ gone down by 12³⁰ and took 4½ hours getting to the Big Cavern, most of the entertainment en route being caused by my top-heavy tangle and my tripod, which tried to entangle itself at every re-belay (not to mention backups). Goodness, I didn't remember the various rifts as being so narrow! I must apologize to Paul Cooper for discarding his view that 2/6 was far too big to break into 1/6; Ridge Cave is indeed a rabbit warren compared to the shaft. I crashed down Nick's Canal rather too speedily, spraining a finger joint and spilling my good humour in the process. The improved Hugging of Fred Flintstone cheered me up again, and landing a Dinosaur Beach again after nearly a year made me positively euphoric. However, when we were at the Big Cavern at last and Neil had taken shots of JT worming his way up Fred's Folly I felt too tired to go on safely. So Team Photo split, Neil & Dan continuing to the Big Beluga and Johnny coming back to join me. We spent an entertaining hour taking pictures (with a magnesium volcano) and collecting dripwater and measured the air temperature to be less than 2.5°C. After this we moved on to D. Beach... I stepped round the corner and shouted and jumped with joy! There was the white Imm Beal dangling down right in the middle of the chamber! Unfortunately we had missed the

~~Got Cooper on this one, after all!~~ Got Cooper on this one, after all!

(2) big breakthrough, Dave R & Graham having landed around 6pm. Well, we took another string of pictures, measured the air temperature to be 2.0°C, and decided to continue the photo-trip up 2/6. Both caves photographed in one trip! But fate would have it otherwise.

I pruned up the Beal, swore at the rub points, asked Jonny to bring up an empty tacklebag (he also found some 'beavers'), and we padded the thing a bit more. Fun to look across to the rope on Fred Flintstone. We were about to look for the way on when we heard Dan shouting something from below. The echo made it quite hard to understand his words, What's an accident? Ukey? Go out as fast as possible - get Paul Cooper down? Oh shit. We dumped the photo stuff and ran along the one obvious route off, while Dan went up Ridge Cave. After some 50m traversing at high level in what seemed to be Upper Lower Streamway Upstream, unfortunately damaging some of the fossil slab in our haste, until ^{the right} (looked like it was about to close down. Getting lost in newly found passage was definitely not on, so we beat our retreat to Dinosaur Beach and followed Dan, not very fast although without luggage. Met Martin May & Jonny Cooper going in above the Axolotl (argh) and surfaced 3:30 am. Lovely warm starry night, though very windy.

What happened elsewhere? Richard had arrived at T.C. at nightfall and set out to descend 2/6 after a short stay. Ukey, Fred & Neil were making slow headway outwards taking the 2/6 route. Dave R & Ian H enter the following morning via 2/6 with sleeping bags, food, carbide and water. Fred had got out that way already by 7am reporting Martin, J. Cooper, Neil & Ukey to have reached Dinosaur Beach. Dave Rose, Graham & I are to go up to 2/6 entrance shortly to prepare a hauling system if necessary... (28/7/88 10am)

B. Neil & J Cooper arrive around 11am, Dave R & G. set out (without me), Graham returning 12⁴⁵ with the relieving news that Ukey is back to surface.

Thanks Goodness.

27 July. Dave R. Graham.

Connected 2/B to Ridge via 25m pitch into ^{Dinosaur Beach.} ~~the~~ ~~area~~ should make system c. 650m deep but not the deepest in the world. Pausing for thought I remarked to Graham: "well it should make a rescue more feasible..."

27 July Ridge Pushing Fred + Ukey.

I walked up early from Base, and as usual we took hours doing little things before getting down. We came ~~around~~ just after 12.

We headed down to the crystal chamber, where we picked up some tackle, wires, tapes, eras, hangars, 20m marlow and an unmarked kym speleoscope ~ 50m.

The "great big" streamway was not that big. We thimble along it with the tackle bags to an inlet on the right hand side with earthen marks in it. Martin and Steve must have had a heroic trip surveying on this. We thought that this was probably the way on, so we left the bags to look at the swamp which was slightly reworked at the streamway deep down cabeza under, but nowhere near as pretty or spectacular.

We went back to the inlet, had a fettle and started to look for the way up. However the climbing got rather hard, and signs of human presence began to fade.

We went down to another inlet lower down, but it was rather narrow, and

74

again there were no signs of people ~~we were~~
~~both climbing~~

We were both climbing up and looking around when I heard Mikey slipping and swearing. She hit the ground, and I shouted, but there was no reply. About five seconds later I shouted again and she replied.

She was lying on her back in the stream, unconscious and motionless. She said that she couldn't feel her left hand side, and that she was deaf in her left ear, and dizzy. Her back was not sore, she didn't have any internal injuries, and there was no blood coming out of her ears. She said that she had fallen 15 ft onto her head. She mentioned something from Tom's notes saying that if you were bleeding inside the skull you would die in 2 hours. †

I tried to sit her up, but she went very dizzy, and had to sit down again, so I put a load of rope and tackle bags underneath her, generators inside her heavy suit, a space blanket over her, and chucked up as close as I could.

Still she was getting colder and colder, and eventually started to shiver uncontrollably. I was very scared, shook her all over and gave her a cup of tea. She was very cold, and was rapidly getting hypothermic. I thought that in half an hour I would be lying beside a dead body.

I had better sit up she says, so I handed her up and we sat back to back for a while, supporting and warming each other. Gradually she began to feel less dizzy. It was OK!

We sat for a while, and ate some pineapple and fish, and then tried to stand. She couldn't stand by herself, but I ~~hugged~~ wrapped the space blanket round her and hugged her to keep her warm, and hold her up. Eventually we were ready to start moving.

She couldn't put any weight on her left arm. We made our way slowly along the streamway, using cunning tactics to overcome the obstacles. At the pike we met Dan and Niel coming down. I sent out Dan with details of what had happened, and Niel stayed to help.

Times.

Fall ~ 6⁰⁰.

Start Scott ~ 7⁰⁰

Meet Dan and Niel ~ 8⁰⁰

Niel was a tower of strength, and we made our way steadily but very slowly to the Big Crunch, we in front, Blakey in the middle, Niel behind.

I waited for hours in the Big Crunch while they did something at the top of Fox'sully. By now it was 2 am. We were running out of food and candles, Blakey's oversight was the tatters, and I was getting very cold and tired. We needed another hour ~~but~~ until help arrived.

We made our way to ~~the~~ ~~B~~ Dinosaur Beach where there was a load of carbide and a new rope hanging down from the roof. The 2/6 connection!

We decided to go out by 2/6, and left the tattered remains of the space blanket ~~set~~ in a sort of arrow pointing towards the rope. I went up the rope and Meezy started to follow. I stood at the top and heard the distant rumblings of people approaching. Meezy by his time was very slow, falling asleep on the pitch, and taking 10 minutes just to take off a rope protector.

As she reached the top of the pitch Paul C and Richard arrived loading full of beams and carrying warm clothes and food.

I was feeling very cold and tired, and felt that if I stayed I would be more of a liability than an help, so I headed out with messages for people at Top Camp.

I struggled patiently slowly up seemingly endless shafts, occasionally stumbling around trying to find the bottom of the bits of black rope. I was absolutely shattered when I got out top a while windy down on the stage ~ 6:30 I got back to camp, told people the news and went to bed.

If anyone who happens to go down to F20 near the
limit of exploration and sees a rope with two knots in
a dunkey's click rope arrangement which may or may not be
attached to a rope of a 15m length, then please bring it
to the surface and arrange for it to be returned to me,
eg. By putting it in the bag of my stuff which I will
leave behind, then I shall be eternally grateful. If not
I shall be eternally ungrateful and shot of two knots.

Yours affectionately Jonathan Cooper xx

what do these mean = Dr Dr 3

My many thanks to Fred & Neil, without whom I would never have made it
to Dinosaur Beach (and who got uncomplainingly stood on and cold);
to Dan for going out as fast as he could and announcing to a
sleeping Top Camp at midnight: "You'd better all get up again"; to
Paul & Richard, team Medic, whom I was very glad to see; to Dave &
Graham who'd earlier that day connected 2/b and Ridge, making everyone's
life a lot easier; to Martin who made my light work by the simple
expedient of taking it away at intervals and giving me another one; and
to everyone who carried stuff down and fed me chocolate and fruit and told
me that I would be OK.

Upel

Dave "I know the technique of fire walking" Horsley

29/9/86 7³⁰am Gerhardt rolling off downhill with empty bottles empty BDM, rubbish.
Hope to be back tonight. Have fun in Ridge - see you there. y.

29th July

To Bottom of Ridge to push, take photos & bring out Neil's camera gear: Martin, Dan, Roy.

To detach Ridge from Dinosaur Beach:

Paul B., Jonathan C., Johnny T., Dave H., Martin L.

(2 Johns & Dave going down 2/6)

Gerhard arrives at a lonely Lages 10 am-ish. Everyone bar Marcus gone to the beach. We leave one diver to guard camp and drive to Cangas to go shopping. The Bar Rio Grande is closed till 1st August and is changing ownership! Had lunch at the Puente Romano. Met ~~the~~ Everyone on their way to the beach in between. Phil D & Paul C. asked us to buy some contraceptives but I left this responsibility with our doctors!

Stopped in Covadonga and went up to the Cueva Santa and to the Cathedral - maybe as a Thanksgiving for Fred's recovery and Ukey's rescue - for those who care about such things. The pool is still unhealthily red.

Afterwards we packed, had a brief swim in Enol (resp. a short sun-bath for Marcus) and ran uphill, 4 1/4 hrs, quite good for an out-of-practice Marcus with a heavy pack. Met one rebecca in the Jon los Cueros. Blazing heat most of the way up. Arrgh. Graham receives us with a brew-worthy man. Now Jim off to Ridge to help hauling...

9 pm Gerhard

29th July 86 Ridge Derigging.

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Martin L and I went down Ridge and met the others at the top of Fred Flintstone. From here derigging was fairly efficient with the only problems being caused by the mega-heavy bag containing the 120m rope. Jonathon C. blasphemed a lot and was v. tired and so went out early. Gerhard came in at 11 pm and hauled the heavy bag up dancing in the dark. Out at 3.30 am after 13 1/2 hours of good stuff.

Paul

P.S. The handwriting is much better as the festered fingers have now recovered.

- Additions -
- a) Nobody seems to have noticed that once more I carefully avoided passing the Axolotl... hehe...
 - b) Martin L came out of the cave with a 3m long tail of Marlow, which Jonny T was using as a lead!

Gerhard

Who said of what (at the entrance to Ridge):
"Actually, mine is pretty distinctive". ?

Who said of what (at Top Camp):
"I know it's easy, it's just not my idea of fun".

Answers on a postcard

At last the time approaches to say Adios to top camp. Fond memories I shall savour from this trouble dwelling place which I shall not leave anyone by repeating. In case I forget 5 trips down. FRO ripped the heart and soul out of me, but having participated in one of the 4 trips which pushed 4/6 to top Ridge this gives some relief. My one down to Faine is that in Okeg's rescue and the ridge descending I may be the only person ever to do the 2/6, 1/6 connection both ways. Unless you know better as they say on That's Life.

Any way it's been great to be here and I hope next year, there will be more grass (and if possible FRO pushed into FRO 2/6).

Southern Copper

P.S. My gear still at top camp includes 4 knots, two down FRO + two down 2/6 and some honey. I hope they come home.

FOUND

P.S. I may also have left my Yellow Sun Sweat shirt behind as well so please don't take it with you.

Ridge 29-30 July. Dan, Martin M Roy

An amateur photography trip/pushing trip went down 2/6 following the ridge descending trip. Fairly efficient, down to the Chamber, & then I into the streamway. My 4th trip down ridge & I might actually get to the sumps. Picked up photography gear made our way thro' the squeeze to the top chamber. Explored an inlet & climbed over a rock that was so thin, light could shine thro' it. Explored

an inlet to a small chamber but air & water both going wrong way for a rump bypass
 Found a 15-20m pitch that drops down into large inlet from ~~the~~ sump to sump II. Took photos - I don't suppose they will come out but you never know. Jackie Sponsorship shots were fun to do. Came out v. slowly - I think we managed to clear Ray out. Also we didn't find a rump by pass but a brilliant last trip.

Now for the losing bits -

On expedition I HAVE LOST

- ① Whitish Sun hat
- ② Swiss Army knife (6 blades marked black & white)
- ③ Silva compass on red string

& for the even more tedious part:-

I WILL LEAVE A LIST OF PEOPLE WHO OWE THE CLUB MONEY AT BASE CAMP. PLEASE GIVE CHEQUES TO PAUL B.

Sorry, Dan

Best of luck with the rest of the expedition. Wish I could stay, forever.

See you all sometime

[Signature]

(82)
30/7/86 Tourist walk of the Spanish Branch (Carlos & Marco),
½ of the Dutch Branch (Paula), the German Branch (Marcus & Gerhard)
and the one and only Martin Lavery representing OVEC itself to
the one and only Ridge Cave. Picked up and brought to Top Camp the
few remaining fackelbags for which many thanks for the efficient help of
the Spanish Branch; left the anchor grease at the entrance to be taken
up to 2/6 (the tin is quite empty though) Lg,

~~We~~ We have had a good time
here! A bit cold ~~and wet~~, but good food!
Thanks for all!

(When you are in Holland
you're welcome)

PAULA

Netty

Netty Nop.
Kraatzweg 25
6732 EV Harshamp.
Holland.

Oranjestraat 45
Arenhem
Holland

My parents address
course on this mo-
ment I have no home.
letters are welcome to.

31/7/86 Dave Rose & Spanish Branch to Ridge Cave via 2/6
Geoff, Ian & Fred : F20 pushing
Phil D & Paul C : pushing alternative route in 2/6 below 5th pitch
Marcus & Gerhard surveying & drying camp
Richard, Graham & Dutch Branch to desperate enterprise in the Valle
Extremero ...
Martin Lavery off to Base Camp.

Dave Rose: a) When you go down to Base, please take Martin Lowery's survival bag with you. It's in Paul's blue tent.

b) Please leave us your London address:

90 Lady Margaret Rd
London N19
01 607 1290
278 2332 ext 3306 (work)

Manuel Cañameras, Carlos Galan, Dave Rose
31/7/86

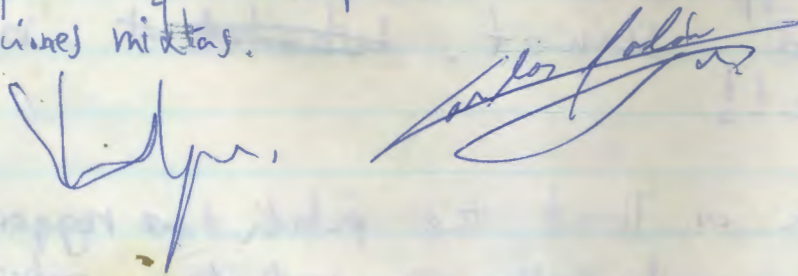
Tourist trip in 2/6 -> Dinosaur Beach.

A very good time had by all. Carlos + Manuel took ~~some~~ photographs + we discussed possible projects: USSR, Turkey, cooperation to get sponsorship.

Long w/ international collaboration among speleos!

Muy contentos por conoceros! Los 400 mts primeros de la sima Conjunta divinos; vjaki todos fuesen iguales.

Esperamos que este primer contacto sirva de precedente de futuras expediciones juntas.



Richard "Infidelity comes to me so naturally" Gregson

Phil "In fact, I think I'm going to take all my clothes off in a minute" Duncan (referring to the lack of central heating in a cool-ish Top Camp)

(OK)

The Ridge cave alternative

31/7/86

Paul Cooper, Phil Duncan

Now that Sina conforas has a sensible entrance series totally untroubled by tight amphibian, and which adds a good few metres onto the total depth of the cave, ~~well~~ all is well and good. But not only is our entrance to this fine system facilitated, there is also an alternative way down via a bag of shit, (Richards) ^{and} a blind pot into a nasty scrupulous crawl at the bottom to a steep pitch which is leading AWAY from the route to ridge cave. Paul and I have rigged part of the way into this fine shaft and somebody needs to go down with more rope to finish it off. We had a good leisurely trip and come out in the for tea and sunset. ~~watch~~ watch this space!!

The situation is that the pitch is rigged but needs a deviator or reelay about 40m down. a tacklebag with ~~to~~ 30m rope in it is hanging on the end of the pitch rope. moulton's and hangers + a bit of food and carbide (1 stick full) are at the end of the crawl.

P.D.

POEM

So
 Farewell
 Picos again.
 They say F20
 Is going.
 Fuck. I would have
 To go to work at just the wrong moment,
 And also
 I appear to have missed out
 On one Dutch branch.

Keith's mum says life
 Is often like that.
 But still
 Coming to the Picos -
 Is a good crack.

Oh god.
 I'll have to come back
 Again.

D. Rose (aged 27)

(too old)

P.S. Good luck nombres. You can do it. Make F20
 prove the Gale hypothesis wrong!

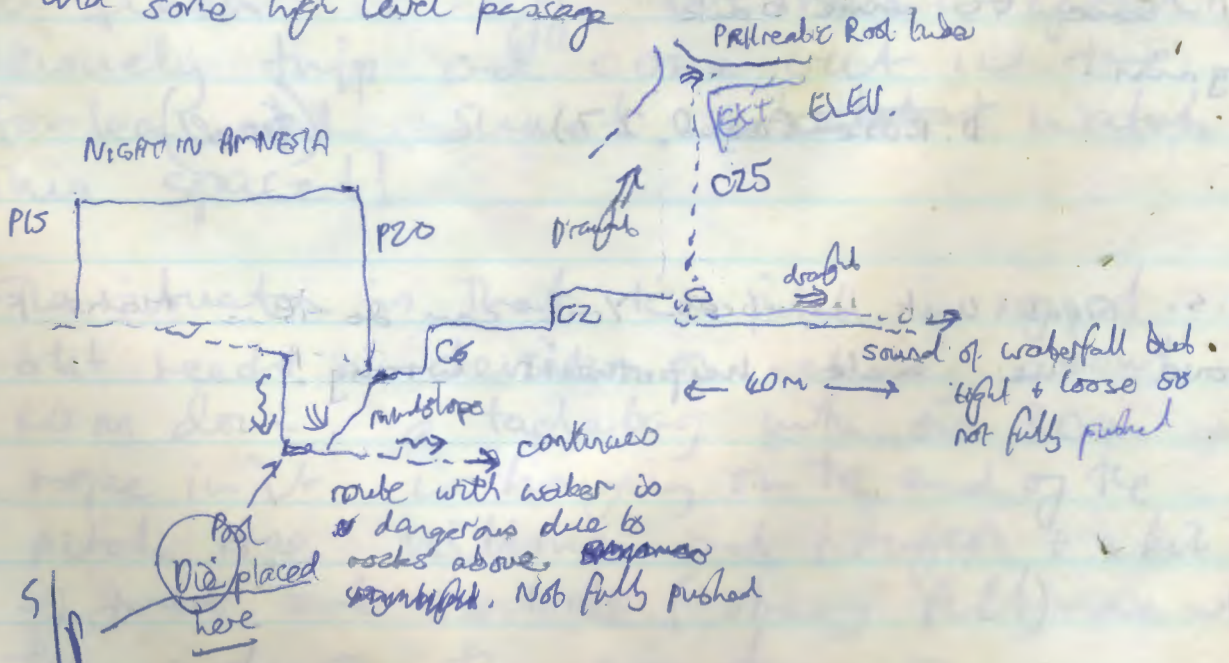
Ian H., Fred W, Geoff.

At last the long awaited pushing trip materialised. The team were well prepared for the occasion, Ian with licks of sleep, Fred walking up from Arno after the previous nights excesses with Bloss + Julian, and Geoff wanting a gerble warm up first trip.

We got down at 12:00, after Fred + Geoff had glued up their suits - while wearing them! We had only anchors + wedges to carry so we were able to reach the limit of exploration by 4:15. Fred climbed up to a 'night in amnesia', rigged it as a pitch, placing 2 bolts. Its about 15m long we used a 20m rope.

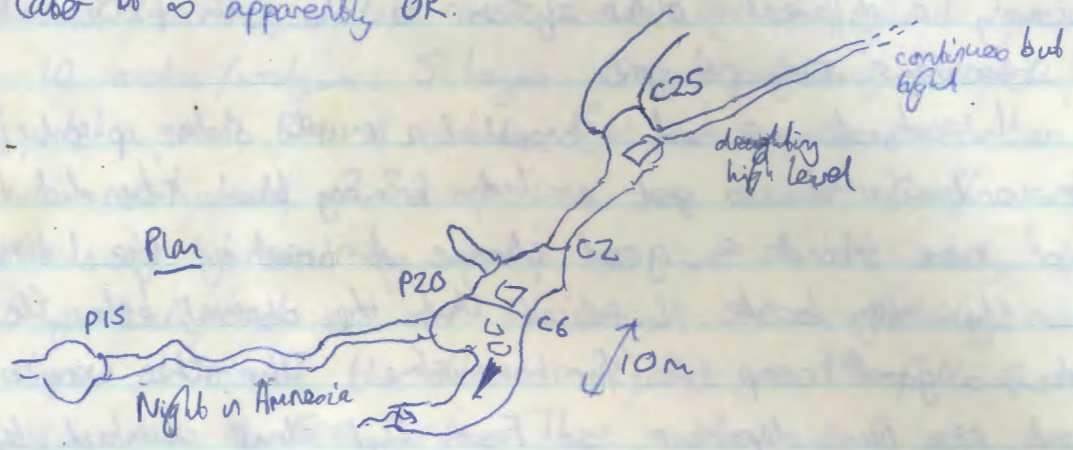
We then dragged our 3 bags along the roof tube to the undescended pitch. Ian placed a bolt and used a large flake to protect himself. I found a natural back up + descended.

En route I discovered a huge stack of unstable boulders and started kicking them down, only to be told by Fred that this was apparently destabilising the large flake I had used for protection - this was some 15m higher! I landed in a large chamber and the others followed down. Downwards led to the stream, upwards to an old inlet and some high level passage.

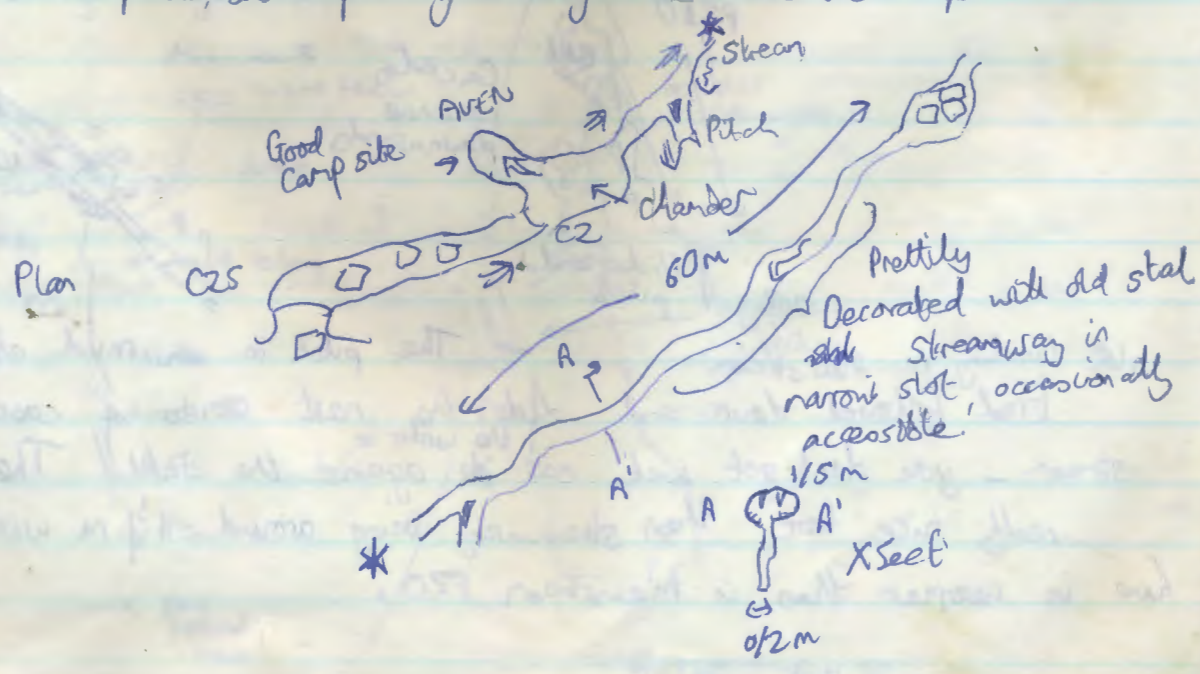


Oh god!
was gale
returned

Fred then put the die into the stream; Merantine Flawine B583 at around 6 or 7 pm. Geoff had a go at the streamway route, finding its passage as a rift. The early part is rather in danger from rockfall, later it is apparently OK.



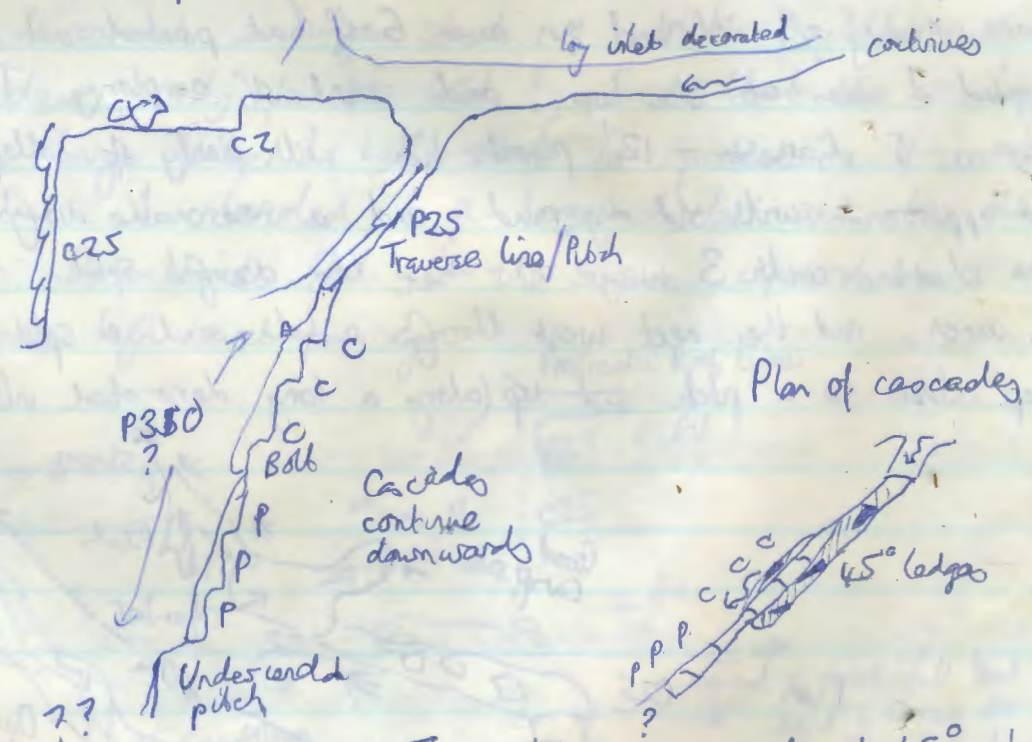
We all then had attempts at the draughting higher levels, one being a horizontal tube that gets progressively tighter and lower but a large waterfall can be heard. None of us reached it. While Fred + Geoff were exiting, I climbed an aven Geoff had pointed out. When the others exited I was at the top, and went off exploring. The aven led to a 6' diameter - 12' plastic tube with plenty of collapse, very old in appearance with old dry mud, and a reasonable draught. This led to a chamber with 3 ways on where the draught split. Most went up an aven, and the rest went through a hole and split to go down a steep slope to a pitch, and up along a long decorated inlet rift



I followed the stream for inlet for 60m, and got water for my generator. (Actually there is water accessible near the chamber I later discovered) The inlet continues, rising only very slightly. It's obviously a different, older system to the main F20 route, and the streamways may not join.

I realised we had intersected a much older, plastic/radose system and started to get excited, knowing that Xitu did this. We must now stand a good chance of breaking the 1 km mark. On the way back I noticed that the chamber below the over would make a good camp site (for hammocks.) The others were a bit worried about my long departure, so Fred had almost climbed the route (with a rope technique?) by the time I got back. Fred rigged the climb which is muddy + loose on a series of rebaring tapes.

All the gear was brought up and after a meal and light fettle I rigged the pitch after the chamber



slot leading to the stream

Fred followed down and did the next series of cascades in the stream - you don't get wet ^{the water is} as ~~is~~ against the wall. The cave is really nice here, the streamway being around 1 1/2 m wide. The cave here is warmer than is mainstream PRO.

Fred got carried away on his long rope + abraded over everything so I care away down + placed a bolt + rope protector for his return. I think we may have gone down about 40-45M in the cascade series.

There is not much gear left now - about 40M of lightest rope, 3 krabs, 2 mauls, 10 anchors/wedgers, 5 hangers, 3 rope protectors, 2 wires, 1 hammer, 1 driver, 1/2 a small BDH of carbide. (at the cascades or chamber above)

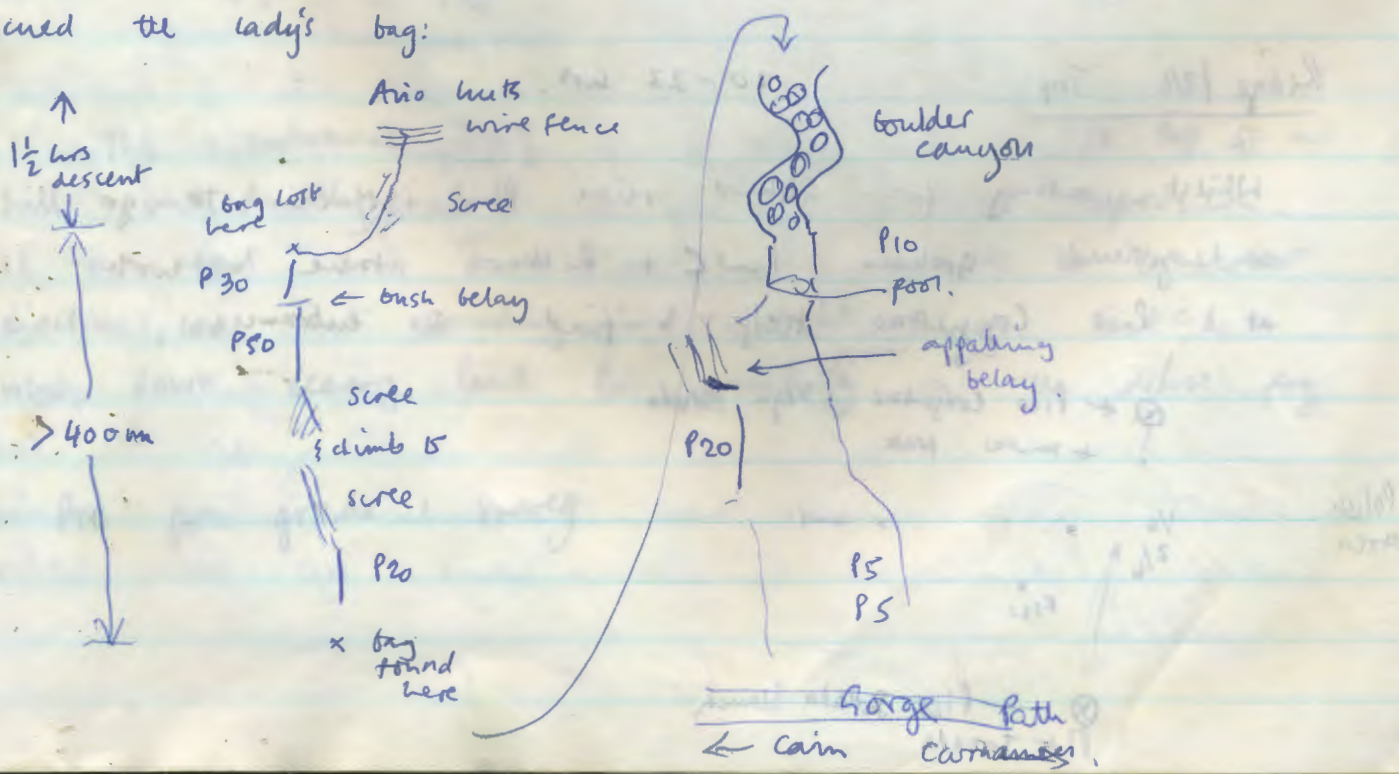
It was now around 2:30 am so we exited, Geoff was quite cold + tired, this being his warming up trip, so we started slowly, but we improved gradually and got out at around 10 am including meal + carbide stops. I moved the other small BDH, now the full of carbide, to the rear end of Ernest's rifle. There is also a 5 pills container of carbide (with no lid) in the land of spikes + gels.

22 Hours. Fabulous trip. Get to it guys. This is a big one!
 Tom

31st August

Marcus W. & Gerhard N. walk around the whole area - Jan las Perdices, Ridge Cave, 2/6, F20, F7, knock several more bolt holes in, take two more bases. Good fun & very hot.

31 July
 Graham + Richard absailed down the Valle Extremosa & rescued the lady's bag:



(90)

2nd August Ridge / 2/6

Gerhard + Jeff photo trip down to big beiga.
Richard, Paul C, Graham Survey of bottom 2/6 to Dico
Martin, Phil Detachable bottom ridge.

We intend to detachle as far as shit
creek and leave the gear there for any further
putting down the road route of 2/6.

NOTE to Dave Horsley — Owing to stupidity I left my
helmet at base camp. Have borrowed yours. Thanks
Richard.

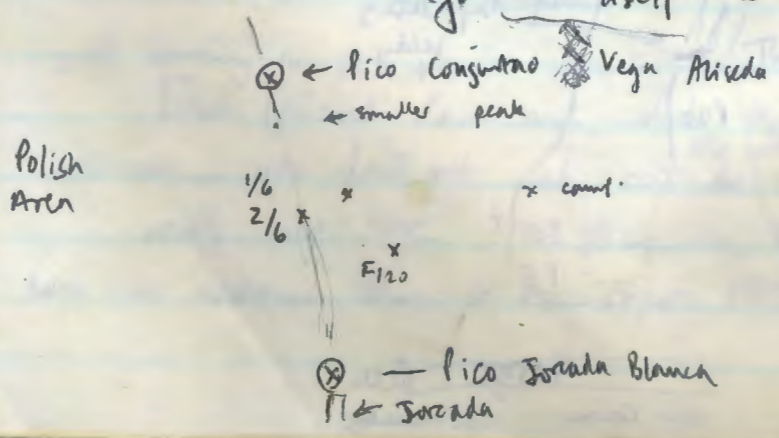
PS I have taken commoner magashity

CC

3rd August: It's raining at Top and the place is becoming as squalid
as Base. Gerhard leaves 5pm to Lagos via Arto, taking down the
ruined gas stove. Have lovely dreams — I'll be back in a couple or
so of days. G.

Ridge / 2/6 Trip: 20-23 hrs.

Whilst waiting for Gerhard since Phil + Martin to go
underground Graham Paul C + Richard take a look
at Pico Conjurao itself & find 2 entrances:



At the smaller peak are two entrances - the first a small slit which rattles for many seconds, the second - an ancient pneumatic tube with much detritus from sheep, rebellious bears, or worse. I will take a peek at these tomorrow.

Then returned to 2/6 to discover that I'd left my base wellies at Top Camp - so did the whole trip to Big Belinga in my trainers

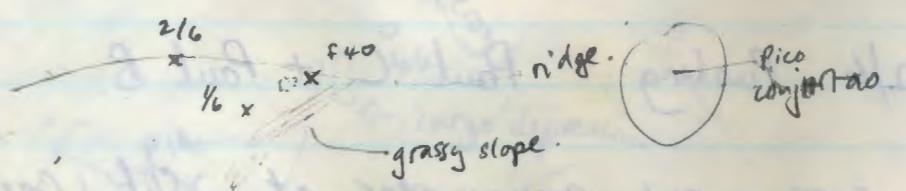
Results: completed the survey of 2/6
de-rigged ridge → Hammerhead
de-rigged hammerhead → Big Crunch.

Came out fricked to discover mist. Mañana Sol.

5 BRITS IN PICOS HELL-HOLE DETACKLING VISIT,

3rd August Pushing E40 (Mist Cave - must translate this)

This shaft sounds like the one Dave H & Phil D found last year. Unable to triangulate entrance.

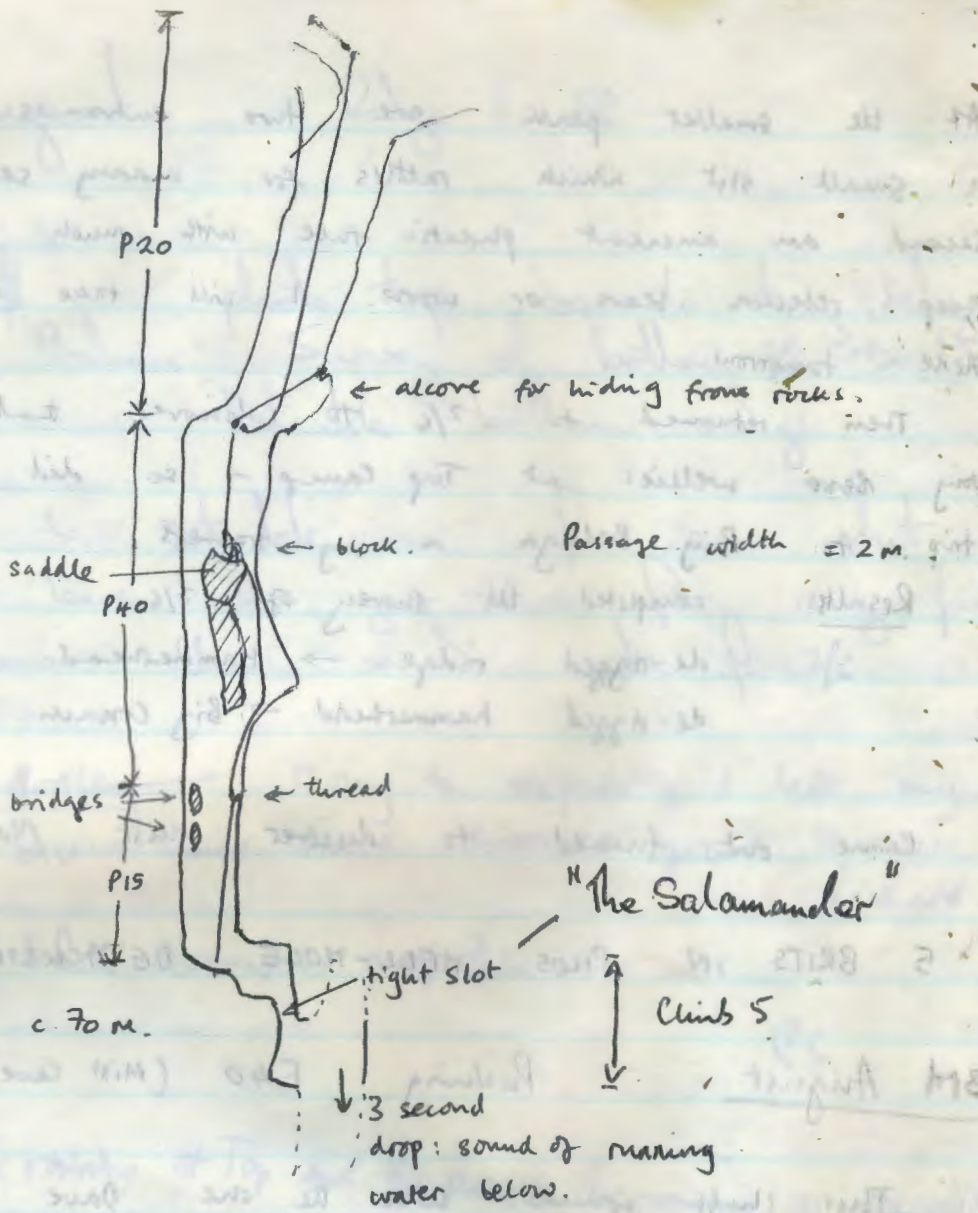


The entrance itself is a small slit in the top of a hill immediately above a small rubble filled depression. it is about 1 m across and 2-3 m wide in the other direction, loose and abounding in natural delays. Paul C & I went down leaving Paul for mummifying in the dense fog.

Pro for grade 1 survey.

92

Grade I survey
of F40. depths
estimated from used
ropes



* cave deranged + marked with red paint.

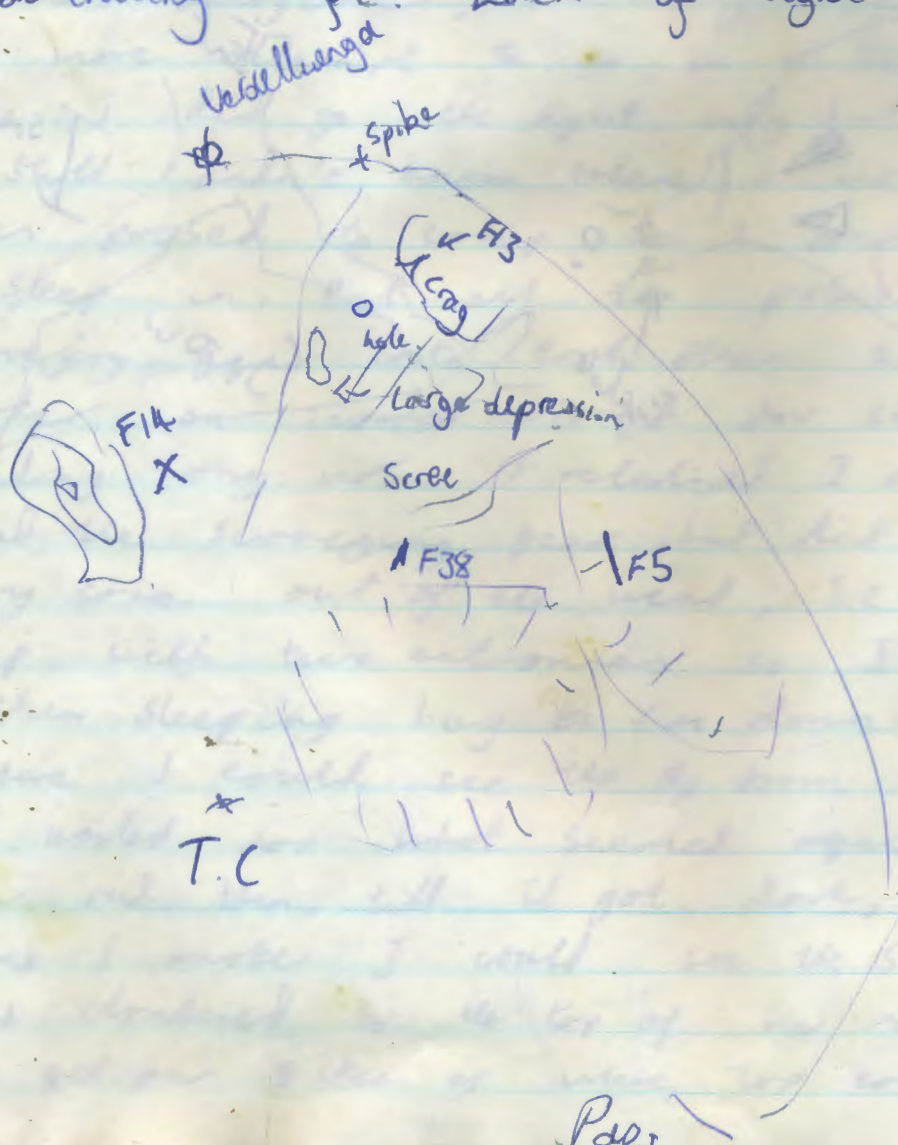
5/8/86 : 2/6 Pushing Paul C + Paul B.

Picked up rope and rigging gear at Slit Creek and went down to the crawl of the wild? and the pitch previously rigged by Phil D. Paul C. hung on the rope trying to put bolts in the exceedingly crap rock. He couldn't so we bugged off taking the excess gear (1 bag + 3 ropes) to the bottom of the entrance shaft. The others had been down and hauled all the rest of the bags up the entrance pitch.

7 hours.

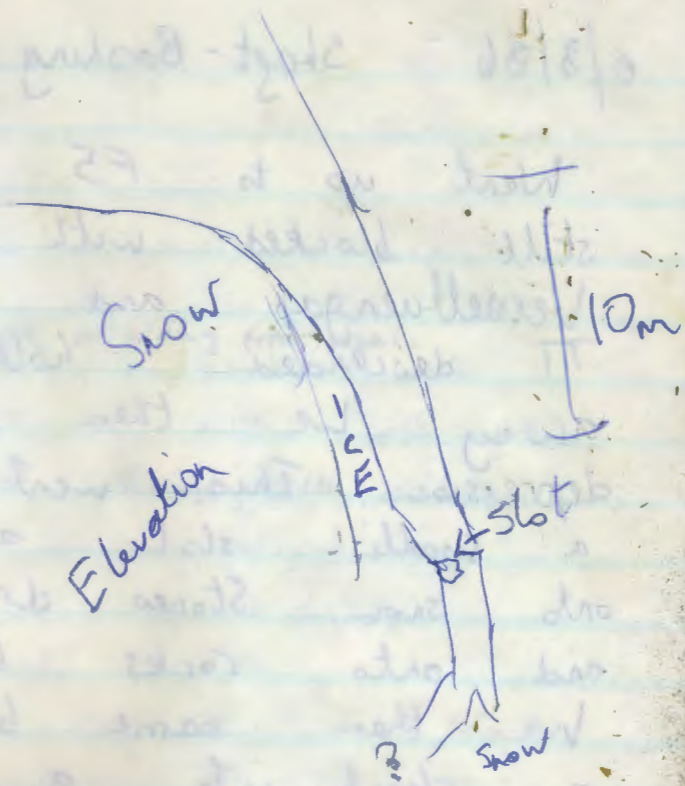
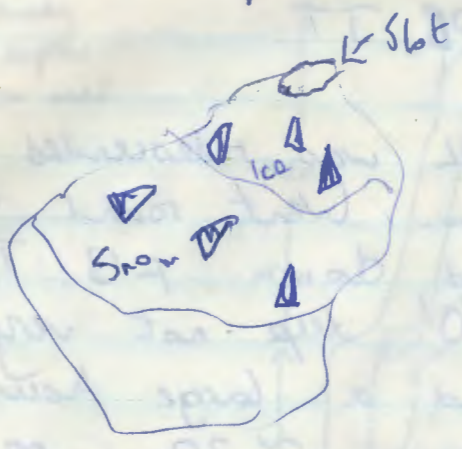
6/8/86 : Shaft-Bashing : PB, JT.

Went up to F5 which was redescended and is still blocked with snow. Went round to Verdelluenga and looked down F13. Then JT descended hole 60' deep not very far away. We then found a large house-sized depression. This went down ~ 20m or to a smallish slot and about a 15 ft. drop onto snow. Stones dropped bounced off the snow and onto rocks before stopping after ~ 4 seconds. We then came back finding F14 which is a climb into a large chamber which JT investigated. At one end the rift continues but is small, at the other a climb leads into a continuing rift. Lack of light halts exploration



94

Large Depression Cave



F14



first core camping Trip.

leaving base camp at \approx 2 pm I set off in shorts + T-shirt for top camp carrying 8 loaves of bread and had a ton of surveying gear.

All went well to leaving the sheep pens on the orca path, just after the path had gone out of sight the clouds set in and I followed the wrong valley up towards top camp. This valley disappeared after some time and I tried to guess the way till I came to a small gorge/cove? with a birds nest in it. I set off in the direction of the lighter sky, estimating this to be the right way at that time of evening only to return to this gorge some time later, I found this gorge 5 times altogether, now very cold + thirsty I made one more attempt to go in a straight line, this time I did go the right way but after some time I still didn't know where I was or if I had even passed to camp, so I found a nice hole to sleep in, put all the poles from the surveying gear into each other to make \approx 20ft high marker on scouted around for some water. not finding any water I realised I also would not find the surveying gear, but did find a small dry core out of the wind, it was about 8m deep with two entrances so I slept in my v. thin sleeping bag \approx 6m down on a 30° slope where I could see the sky from both entrances.

I waited for what seemed ages, dozing of every now and then till it got dark, then the next time I awoke I could see the stars. I got out and clambered to the top of the ridge I was on to get an idea of where top camp was in case

(96)

it would be cloudy again when it was light enough to walk then returned to my core.

When it was light enough to see where my shoes had rolled to I forked up and started towards top camp, where I saw 2 light coming over the top of the ridge, I shouted to no reply, and made my way to top camp to find Phil, Martin and Geoff. Making tea and heating the stew, after the meal I couldn't sleep so went out in search of surveying gear, I had to go all the way back to the airfield, found my gorge again, then almost walked into the root of poles. got back to top camp about 9am. to find everyone up. then soon after went off to haul up 2/6 entrance shaft while the mega F20 survey/push/sheep trip set off.

J.T.

Comments Page.



97

Trace Gear.

Aquaguard Rope

Very nice to prowl on, surprisingly not too bouncy*
not too bouncy my foot!! and not that abrasion
resistant. Feels about the same as PMI but then
it is \approx 2mm thinner so I suppose its not bad, PD

Berger Sit Harness. ("50")

Very comfortable to wear the only problem is that it is
prone to abrasion particularly where the leg loops are attached
to the harness.

VERSATILE

This is the most comfortable & versatile harness I have used, Abrasion appears
to be a problem especially over leg buckles & mailon attachment loops.

Mailon attachment loops not strongly stitched enough and
very prone to abrasion (mine is very bad indeed, Net)

very comfortable but mine has already worn hole way through
on the back waist belt. J.T.

Troll suit

Material is very nice & flexible so the suit doesn't
restrict movement. Very waterproof. Could do with one or
two press studs to fasten the front, as down a very
muddy cave the velcro tends to clog with mud.

90 hrs before my first year - Great but the pocket
is too low, & difficult to get at when wearing chest harness)

Too long in the chest which means the pocket ends up under my belay belt,

Otherwise excellent stuff.

Down by the balls the outer closing flap
needs extra stitching as it always comes unhooked.

Lyon Equipment.

Lyon Speleo Rope

10.5 mm

9 mm

This is a Beal imitation and as far as I can tell the same high quality. My 40m length of 9mm Beal has shown less bounce than 11mm PPL, is much more flexible and easier to tie into knots, and to braid, is more comfortable for abseiling than the black Marlow stuff (though fast) and seems not to be too abrasion-prone. (Yakhard)

Petzl Laser headset.

My piece jammed after 50 hrs. Other than that ~~the~~ a brilliant light.

Overdesigned - I did quite a lot of things to mine. (and as ~~for~~ sawing off the pin that's supposed to lock the electric unit) Halogen bulbs don't fit unless you drill the socket out. Otherwise working well. I'm using a small (140/hour) jet which gives bright enough light with the reflector.

Easy to hard to change bulb underground.

Arione generator

Mike found this difficult to keep going. I think he said the problem was in the gas feed. Not being able to take it apart is a big minus.

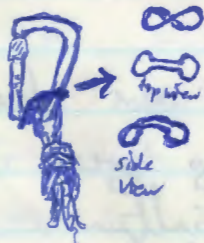
Hangers.

New Petal hangers are an improvement what regards feeding maillons in with their big holes. and its easier to use large knots.

Tomms.

Krobs.

Suggestion for cow's-tails:



little steel buckle (or alternatively loop of flitch rubber band)
 keeps knot at bottom end of krobs.
 Disadvantage: knot is harder to tie in.

Furries.

Smell.

I know a man in Manchester who makes good funny suits for about £15-£17, to measure. if you want one, see me. P. Duncan.

Drivers.

The new design driver is difficult to grip. Replacement threads are a good idea.

Tools Equipment

Hammers.

Very nice. The socket in the handle is particularly
well. Petzl hammers ludicrously expensive but there aren't any better ones

9.000

This is a Best indicator and depth gauge (or all the same high quality by the
level of the tool. The other values are too
... ..
... ..
... ..



Caving Supplies.

icible bags.

Petzl lamps

... ..
... ..
... ..
... ..

Rocks & Rock bars.

Keep 'em hot hombres!

SRT bags.

- too small & the lower hanging loop means that the bag hangs awkwardly when full - prefer my Trystant bag

The pull cord thingy is only just big enough when clean, when the thing muddies up it becomes impossible to do up the bag. hardly big enough to fit my tools now they are muddied + stiff.

Black Marlow.

About the best rope for prussicking and also when you is very good for abseiling. If the old marlow is anything to go by though as it muddies up abseiling will become more difficult.

Problems - black this produces major problems for perules as you cannot see where the rope goes, or how much to let out on the perule.

Initially the ~~sheath~~ sheath of the rope seemed to pull easily, i.e. small threads / loop of thread were pulled from the sheath.

Handwritten text, mostly illegible due to bleed-through from the reverse side of the page.

Blank!

Blank! (mirrored bleed-through)

Large block of handwritten text, mirrored bleed-through from the reverse side of the page, covering the lower half of the page.

Camping in F20

Richard Fred Dave Rowley.
37 hours

It is 5 whole years since 1981 and the glacier Amador camp in Xitu. Since then we haven't found a cave where camping was at all necessary, until now. Although much less deep (as I write) than Xitu, F20 is a far harder trip. Fred insisted he knew the campsite, so off we went. First problem; I (Richard) basically took a free fall on the pitch before Rowley, snapping out of control into the floor as my Italian pitch developed Anglophobia. I was OK, but what a bad angry!

God the rifts are awful, but the passage we began to survey - from the '85 limit, got nice & nice. Reached Fred's campsite after 47 stations to discover that it had no floor at all. Fortunately (for Fred) we discovered a delightful spot nearby & were soon munching beanfeast. We slept for 6 hours. I was old, but had pleasant dreams. In Xitu the camp had the fukking / gurgling sound of a stream which made you dream of people whispering, or orchestras playing funeral music, or girlfriends calling to you from a long way off. Everyone had bad dreams there but no-one liked to talk about them. Dave Rose claimed he sustained an erection at that camp, but no-one saw the evidence. In F20, with its colder air, I should be very surprised: no storkies in F20.

Pushed the cave to a big chamber & niceable pitch then made our way out. Dave developed the slits + had a nasty habit of puking down the pitches towards Fred: SRT = Successive Regurgitation Technique.

I'm off to Buginty soon.

Good luck with F20 (the cave, or the ramrods, or both). Remember, you're big shaft men.

Richard

(104)

Phil "I've always been a good bottomer" Rose

Dave "I got plenty of brains" Horsley

7/8/86

Richard leaving downhill, Roy & Fred going to Base

Phil, Phil & Martin M > Camping in F20

Marcus & G running about with 'heavy red and white poles' and taking sightings whilst D.H. is having a pee

Duncan being sick

Jonny T keeping camp tidy

8/7/86 : -morning

Dave H & Jonny Tidying Camp & putting the rope under cover. Duncan washing up. Gerhard & Marcus surveying

- afternoon -

2/6 pushing / photo trip wave 1 Jonny T., Gerhard, Duncan left 12.30 pm

Wave 2 Dave H left 3.00 pm

If anyone from base wants to come and give a hand hauling bags out of 2/6 this evening any help will be most gratefully accepted.

Things needed from base.

- Chocolate
- tin of fruit
- tin of meat
- veg.

Wavy

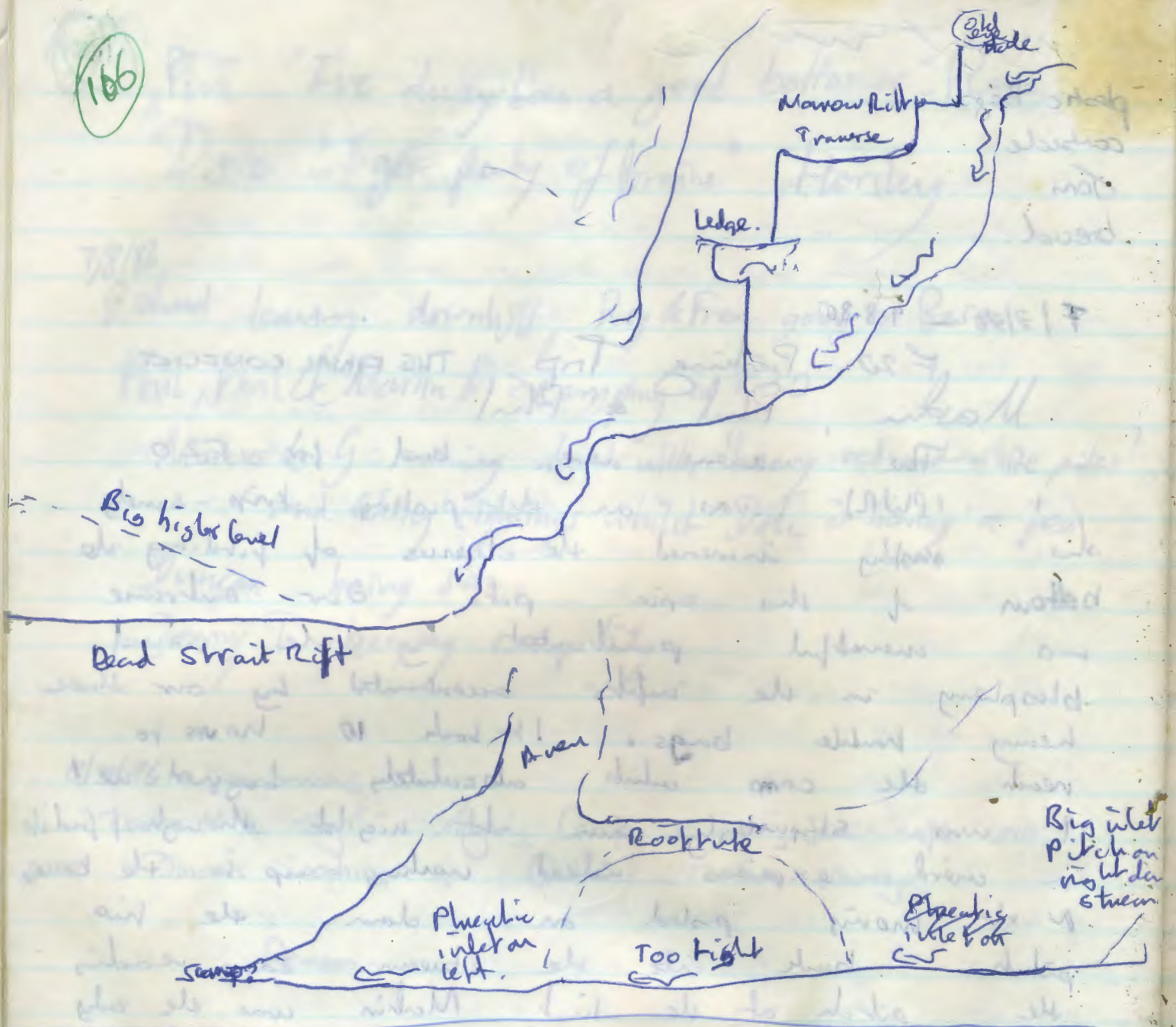
plastic bags.
outside
Sam
bread.

F/7/76 - 9-8-86

F20 Pushing Trip THE FINAL CONFLICT
Martin, Phil & Phil

The ams were bad for F20
 (Phil R) was on the pushing trip - surely
 this vastly increased the chances of finding the
 bottom of this epic pit. Our entrance
 was somewhat punctuated by the usual
 blasphemy in the nets accentuated by our three
 heavy handle bags. It took 10 hours to
 reach the camp which absolutely buggered us!
 I was surprisingly worn at night though I had
 a weird experience indeed working up in the cones.
 Next morning pushed on down the fine
 pitch back into the stream soon reaching
 the pitch at the limit. Martin was the only
 one who's faculties were 100% so he set off
 down the ~~the~~ ~~probable~~ ~~we~~ ~~topped~~ ~~pit~~ ~~disrupted~~
 the sunning. At the bottom I am immediately
 heading ~~of~~ ~~support~~ ~~some~~ ~~fine~~
 inlets to THE SUMP! Well we could see
 a canal going round a corner with ~ 1 foot of
 air space but it would be a total inversion job
 to ditch out - no joke at the end of F20.

166



12th August: Detackling Team 2 down at ~12 I cannot locate my furry so I have borrowed one out of Richard's tent (Durcan?) hope this is OK

AB

if anyone has seen
or moved by helmet
& generator could they
put it somewhere I can
find it. The helmet is
red with JV written
inside it, and the
generator, has 2 red
paint marks on it.

Jon. J.

(who says I can't write with my left
hand!) I'm off to base now with some
rubbish as I didn't deal w/ my to detaching today
Fred, Andy, Duncan and Dave already set of day
P20, Phil A, & Dave set of for base.

PAUL HAS ~~JOHNNY'S~~ HELMET

15/8/86

108

Fred, Dave, Duncan, Andy, Gerhard & Boris
detaching P20 from the Eyehole upwards.

Boris turned out to be a rather passive
member but eventually we knocked some
sense into him. 8 hrs. Many Lombres duros
helped with the carry back.

All our biggies are now marked
as bottomed (in red) and all the route
cairns have been smashed (some are
still recognizable if you look carefully -
just as well as I walked up to P20 in the
dark after the cairn-smashing.) No more
hackle and no obvious rubbish left at any
of the entrances. Thank you all.

G.

16/8/86

5 am

Woken up for the umpteenth time by the
wind, I proceed to scan the sparkling stony sky - with unaided
eyes at first, then, enthralled, with my binoculars. Interesting objects encountered
included:

- three galaxies: our own one, the Andromeda Nebula (M31)
and the Triangle Nebula (M33) - the latter is so weak that
only in this clear mountain air it becomes visible with a
binocular (I've never seen it before)

- several star clusters;

- Jupiter, with two moons;

- the double star ϵ Lyrae (each of the components is again
a double star, but only through a big telescope);

- many many shooting stars.

Mr. who turned on a light in his tent at half five) was also called out to
admire the sky, and didn't regret it.

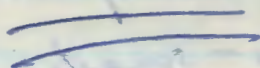
G.

110 (104)

▷ also, I have taken the gear you showed me, also 1 medical kit + rubbisher
love
to man with 1 hand.

17/8/86. Dave H & Duncan G.
Survey & pushing down F40

We surveyed a ridge this to a chote. It does not go. See the survey at the back.
Oh! some people don't half over estimated pitch lengths.

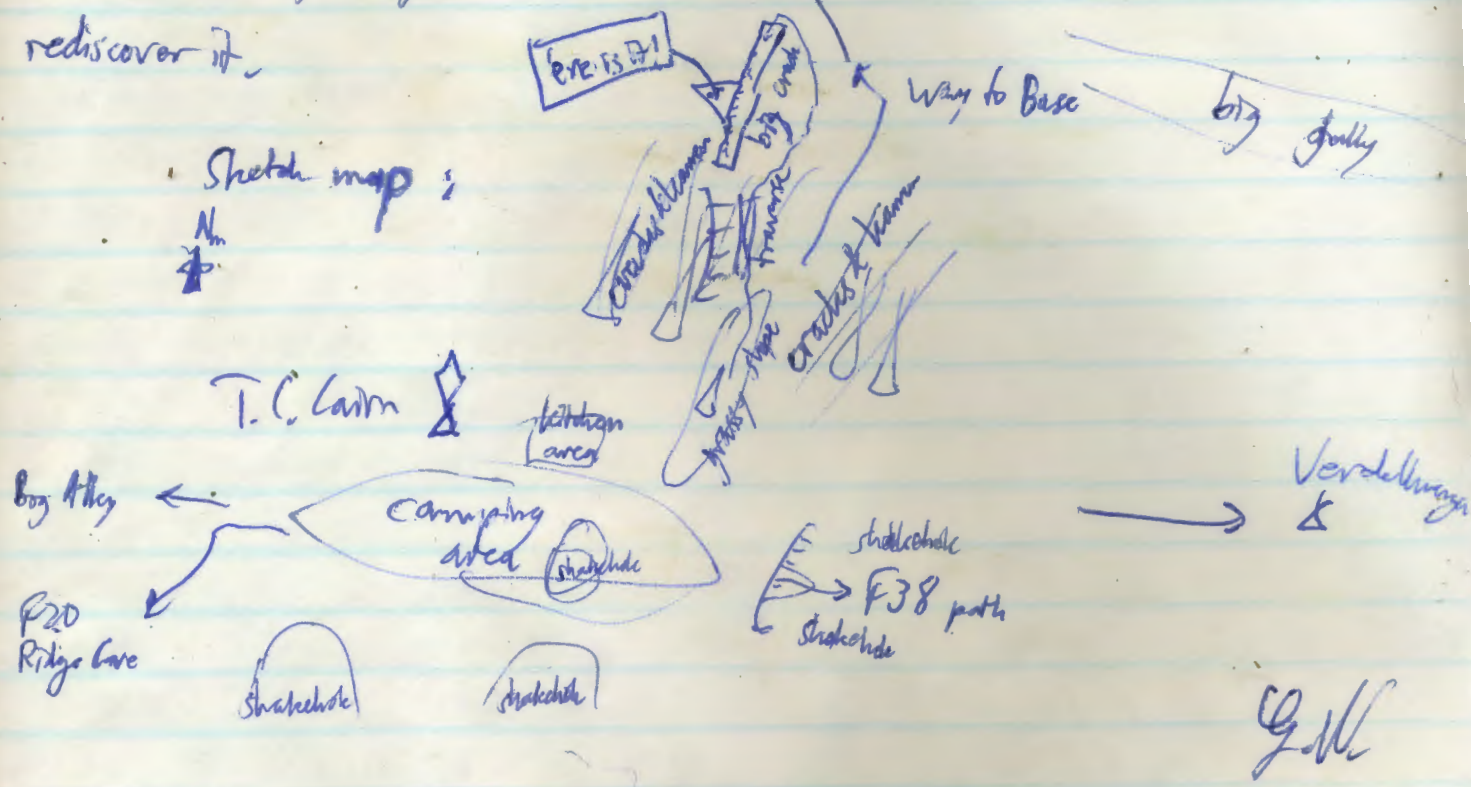


18/8/86 Dave H, Duncan G. & Gerhard N. establish foot cc.
dept in biggest of crades E/NE of T.C.: walk down the
grassy bit as you would do walking to Base, traverse to the
left at the bottom end and clamber down the big deep crade
with the sharp flakes. The dump is in an alcove on the
far (western) side and is not visible until you actually stand
in front of it. Helmet gloves are advisable.

The dump contains: - 4 tins Mornflakes the orange & blue
water containers, 2 washing up bowls (one of which broken, may still
be used to drain washed-up cutlery), 6-odd pairs of wellies
(amongst which one pair of mine - if I don't make it for

The beginning of the '87 Expedition, you're welcome to use thunk, dozens of unmatched gloves, the awning & its poles, three or four boxes full of carbide ... Dave H should be able to rediscover it.

Sketch map:
N



G.M.

RIDGE CAVE SURVEY 20.7.86

labelled 'H'

(51)

Book: Urs; Instruments: Dan; Tape: Paul B.

From head of Hammerhead Pitch to Crystal Chamber

Station 1 is the last station of the 1985 survey

	Tape	Compass	Clino	At Station	Station height	Passage width	Existing	Northing	↑-up	Station	relative to Station 1		
							Δx	Δy	Δz		X	Y	Z
1-2	1/45	304	-18				-1.14	+0.77	-0.45	2	-1.14	+0.77	-0.45
2-3	20/20	255	-83				-2.38	-0.64	-20.05	3	-3.52	-0.13	-20.50
4-3	18/16	105	+54	4		= 3/0	+10.31	-2.76	+14.69	4	+3.83	+2.90	-35.19
5-4	12/71	132	+02	5	2/0		+9.44	-8.50	+0.44	5	-23.27	+11.40	-35.63
5-6	32/00	187	+31				-3.34	-27.22	+16.48	6	-26.61	-15.83	-19.65
4-7	3/85	077	-38	7	= 1/5		+2.96	+0.68	-2.37	7	-10.88	+3.58	-37.56
7-8	9/01	141	-29	8	= 1/0		+4.96	-6.12	-4.37	8	-5.92	-2.55	-41.93
7-9	9/68	187	-18				-6.12	+9.14	-2.99	9	-12.00	-5.56	-40.55
10-9	6/11	082	+57	10	= 1/2	= 1/5	+3.30	+0.46	+5.12	10	-15.29	-6.02	-45.68
11-10	5/37	075	+50				+3.33	+0.89	+4.11	11	-18.63	-6.92	-49.79
12-11	15/55	042	+75				+2.69	+2.99	+15.02	12	-21.32	-9.91	-64.81
12-13	7/39	271	-42				-5.49	-0.10	-4.94	13	-26.81	-9.81	-69.75
13-14	13/41	315	-51	14	= 2/0	= 3/0	-5.97	+5.97	-10.42	14	-32.78	-9.84	-80.18
14-15	10/80	031	-32				+4.72	+7.85	-5.72	15	-28.06	+4.01	-85.90
15-16	1/11	009								16	-28.75	+10.55	-99.76
15-16	13/56	354	-61	16	= 1/5	= 1/5	-0.69	+6.54	-11.86	16	-27.27	+13.85	-103.65
16-17	11/11	009	-32	17	= 2/5	= 5/0	+1.47	+9.31	-5.89	17			

NB, Δx , Δy , Δz are always from the

first-named to the second-named station.

They are added to x,y,z for forward legs

and subtracted for backward ones.

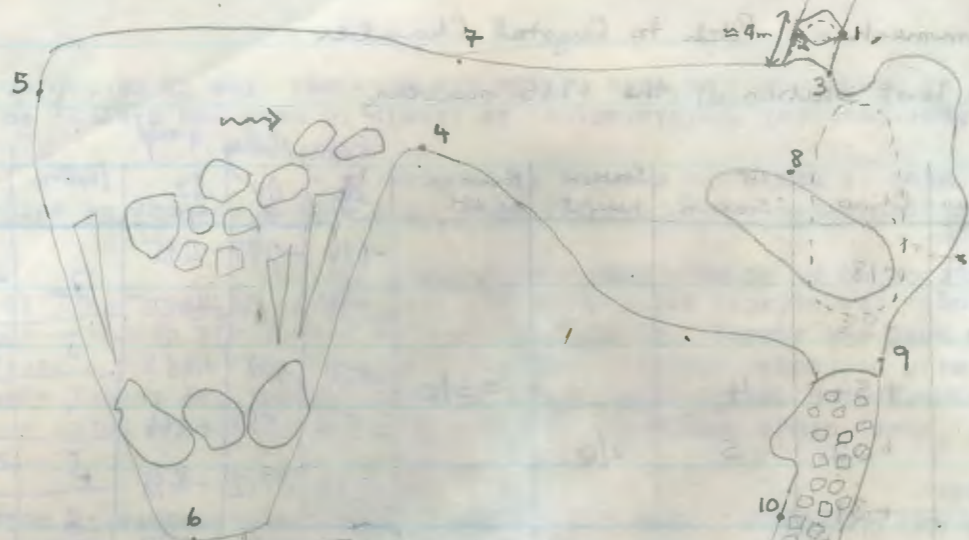
(Accumulation is done with full accuracy of calculator, which may (after rounding

to cm) lead to apparent discrepancies

in the last place - don't let this bother you)

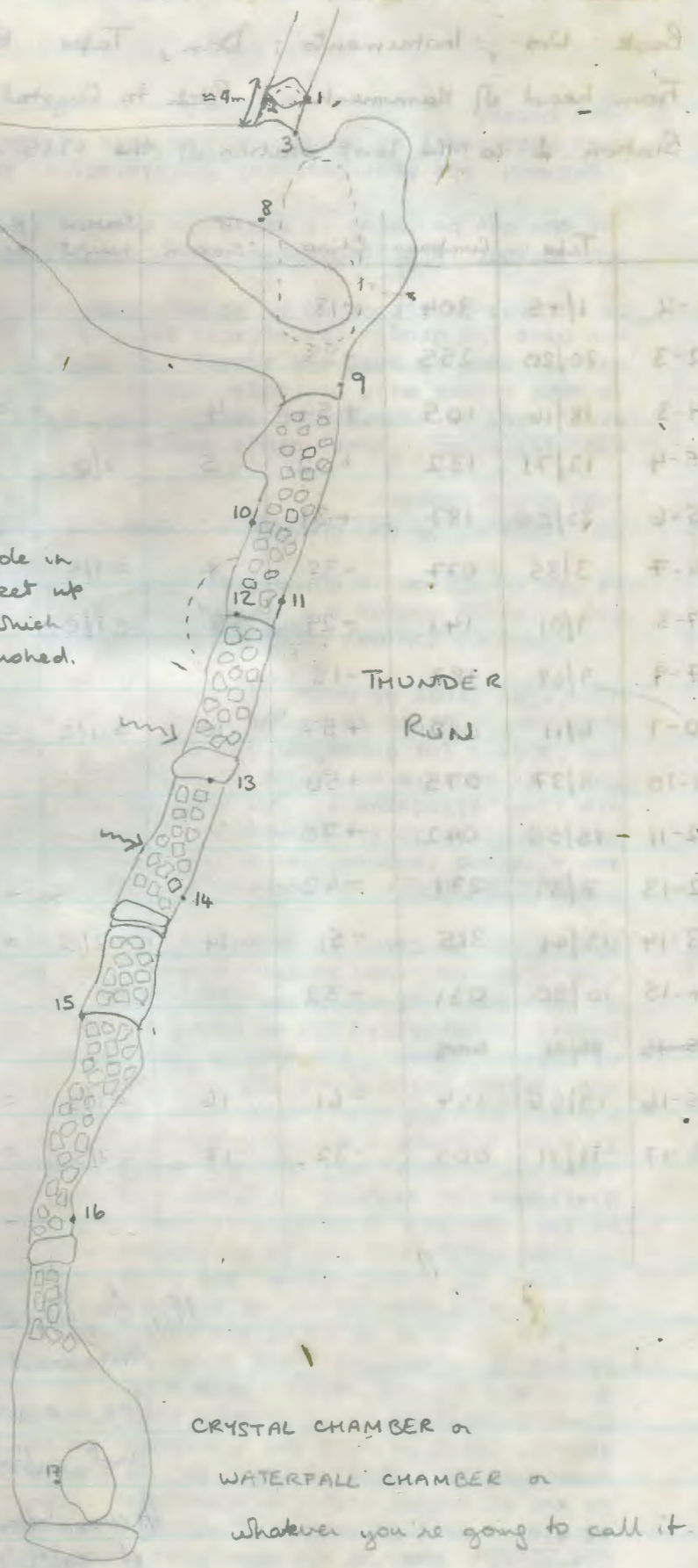
52

BIG BELUGA



← This is a hole in the wall three feet up from the ledge which has not been pushed.

CROSS-SECTIONS



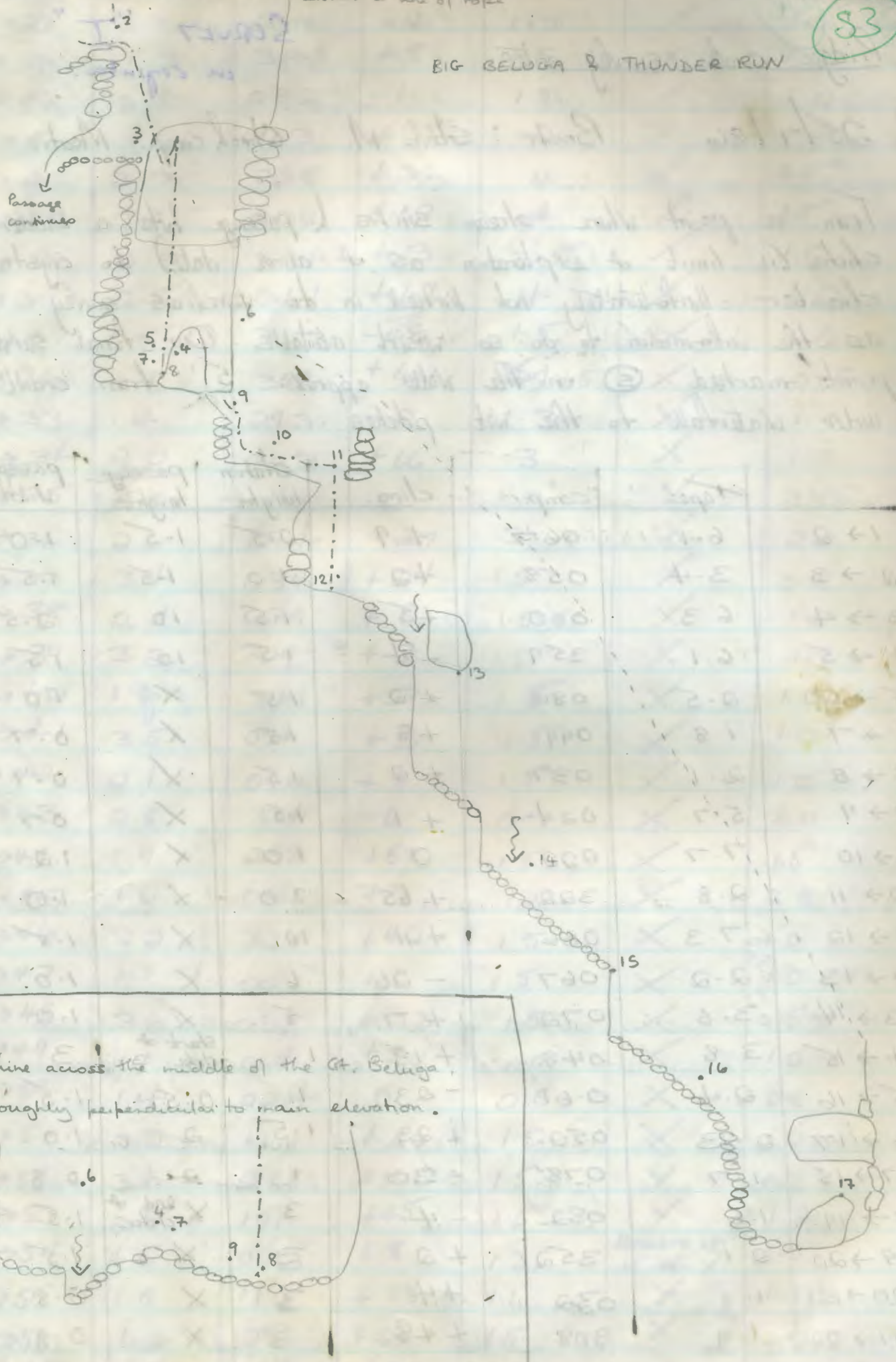
CRYSTAL CHAMBER or
WATERFALL CHAMBER or
whatever you're going to call it.

RIDGE CAVE SURVEY

Station	Time	Notes
1	1:15	2-1
2	1:25	2-2
3	1:40	2-3
4	1:55	2-4
5	2:10	2-5
6	2:25	2-6
7	2:40	2-7
8	2:55	2-8
9	3:10	2-9
10	3:25	2-10
11	3:40	2-11
12	3:55	2-12
13	4:10	2-13
14	4:25	2-14
15	4:40	2-15
16	4:55	2-16

BIG BELUGA & THUNDER RUN

--- = line of rope



line across the middle of the Gr. Beluga, roughly perpendicular to main elevation.

Passage continues

Ridge cave survey notes.

25/7/86 Book: Steve M. Chirok camp. Martin

From a point where stream sinks & passage hits a boulder
choke (ie limit of exploration as of above dated) to crystal
chamber. Unfortunately not linked in ~~the~~ previous survey
as the information to do so wasn't available. Our final survey
point marked (S) on the wall approx. 5' from crawl
under waterfall to the wet pitches.

	Tape	comp.	clino.	Station height	passage height	passage width
1 → 2	6.1	067	+9	0.5	1.5	1.0
2 → 3	3.4	058	+2	1.0	1.5	1.5
3 → 4	6.3	080	+5	7.5	10	2.5
4 → 5	6.1	359	-4	1.5	10	1.5
5 → 6	2.5	080	+2	1.5	X	1.0
6 → 7	1.8	099	+8	1.5	X	0.7
7 → 8	2.1	037	+2	1.5	X	0.7
8 → 9	5.7	024	+1	1.5	X	0.7
9 → 10	7.7	022	0	1.0	X	1.2
10 → 11	2.8	322	+65	3.0	X	1.0
11 → 12	7.3	086	+11	10	X	1.5
12 → 13	2.2	067	-26	6	X	1.0
13 → 14	3.6	072	+7	5	X	1.0
14 → 15	3.8	048	+19	1	start of choke 3	3
15 → 16	2.4	0.61	-23	1	0.5	1.5
16 → 17	2.3	050	+23	1.5	2	1.0
17 → 18	1.7	078	-30	1	2	0.8
18 → 19	1.6	082	-4	3	X end of choke	1.5
19 → 20	2.1	352	+2	3	X	1.5
20 → 21	1.9	032	+4	3	X	0.8
21 → 22	1.9	308	+48	3	X	0.8

22 → 23	3.7	267	-4	1.5	X	1.5
23 → 24	1.3	349	+8	1.5	X	1.0
24 → 25	2.8	082	-1	1.5	X	1.0
25 → 26	1.5	113	+35	2	X	1.0
26 → 27	2.7	038	+32	4	X	1.5
27 → 28	2.1	032	+10	4	X	1.5
28 → 29	2.8	304	+3	3.5	X	1.0
29 → 30	2.5	041	+12	4	X	1.0
30 → 31	2.5	317	-49	1.5	X	1.0
31 → 32	2.1	359	+12	1.5	X	0.8
32 → 33	1.4	293	-2	1.3	X	1.0
33 → 34	2.0	323	+6	3	X	1.0
34 → 35	5.0	002	0	1.3	X	2.0
35 → 36	2.6	294	+27	3	X	2.0
36 → 37	3.4	034	+24	1.5	X	0.8
37 → 38	2.1	039	+8	1.5	X	1.0
38 → 39	3.2	309	+3	1.5	X	0.8
39 → 40	1.6	341	+7	1.5	X	1.0
40 → 41	3.5	094	+3	1.5	X	1.0
41 → 42	2.1	040	+1	1.5	X	1.0
42 → 43	2.8	334	-6	0.7	X	1.0
43 → 44	1.9	283	+51	1.5	X	1.5
44 → 45	1.6	030	+3	1.0	X	0.8
45 → 46	2.2	320	+42	1.5	X	2.0
46 → 47	1.1	007	+6	1.5	X	1.0
47 → 48	3.1	038	+23	1.5	X	0.5
48 → 49	1.1	064	+20	1.0	X	1.0
49 → 50	1.4	024	0	0.8	X	0.8
50 → 51	2.2	101	+60	1.5	X	1.2
51 → 52	3.1	081	+47	1.5	X	1.2
52 → 53	2.5	101	+45	1.5	X	1.2
53 → 54	4.6	023	+8	1.3	Boulders at 15 ft X	1.0
54 → 55	1.8	112	+18	1.1	X	1.2
55 → 56	1.2	088	+28	1.5	X	1.0
56 → 57	1.7	104	+32	2.2	X	1.0

57→58	4.5 (56)	087	+20	1.5	X	1.2
58→59	1.8	119	+4	1.5	X	1.2
59→60	2.1	145	+26	1.6	X	1.2
60→61	4.2	125	+28	1.0	X	1.2
61→62	3.3	117	+24	1.7	X	2.5
62→63	8.9	147	+78	1.5	1	1.5
63→64	5.8	120	+23	1.5		4
64→65	16.8	\	Vertical i.e. up 333	0.5	1.5	3.5
65→66	6.6	220	+45	1.2	3	2
66→67	3.5	062	+12	2	40	14

ALL READINGS TAKEN UPSTREAM TOWARDS ENTRANCE.

See extra leg to join over page.

N.B. @ survey station data refers to the station being surveyed to.

ⓧ — means height of passage unknown (a dashed line at approx 15-20m. probably appropriate?)

For most of survey, diagrams were not made as they were pretty useless. However the following information can be included.

- ① Poles between 2 and 9
- ② Inlet at station 10 from RHS facing down stream bearing approx 280

③ Between 15 and 19 the stream hits a choke and the route is between boulders approx 5-8 m above stream.

Also between 15 and 16 are two inlets on RHS facing downstream.

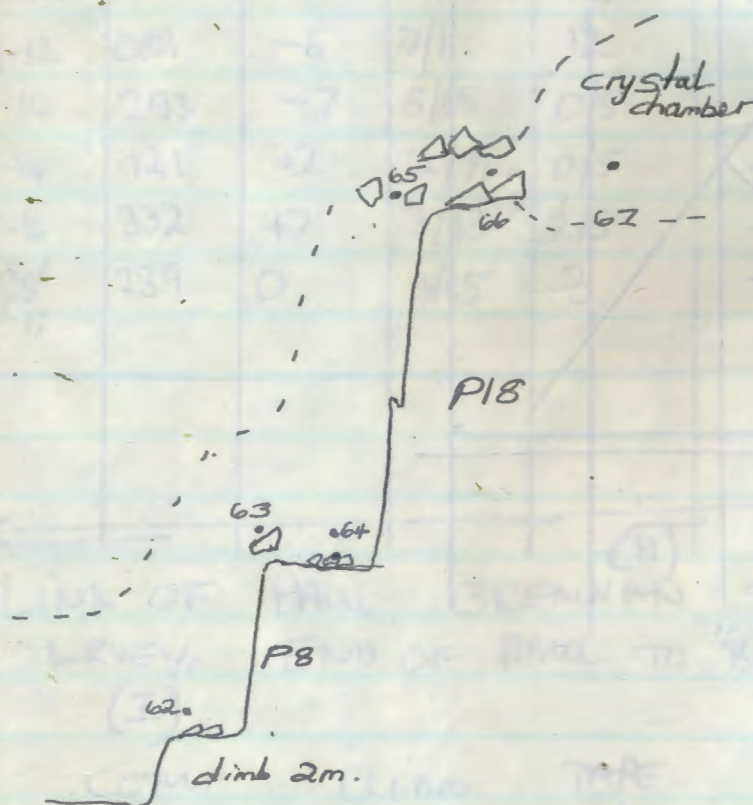
④ Between 36 and 37 is 1.5m drop into pool

⑤ Small inlet on RHS facing downstream at 51

⑥ 62 → 63 is 2nd pitch in streamway ⇒ 8m.

⑦ Between 63 and 64 is an inlet on LHS facing downstream.

⑧ 64 → 65 is 1st pitch in streamway ⇒ 18m.



(38)

Ridge core - Sump chamber.

P. DUNCAN

D. MORSELEY

26/7/86

Comp 514447

CLINO 510270

No	COMPAS	CLINO	TAPE	PASSAGE LENGTH	PASSAGE HEIGHT	STATION HEIGHT
0 → 1	132	-31	2/6	1/2	-	0/5
1 → 2	113	+21	2/6	0/1	-	-
2 → 3	128	+8	2/6	1/4	-	-
3 → 4	202	-19	2/6	2/35	-	0/2
4 → 5	222	+5	2/6	1/3	-	0/3
6 → 5	065	-29	2/12	-	-	2/1
6 → 7	241					
9 → 8	200					
9 → 10	064					
11 → 10	216					
11 → 12	072					
13 → 12	224					
13 → 14	089					
15 → 14	293					
15 → 16	121					
17 → 16						

BOULDER
CHOKE
SQUEEZE

LINK
BETWEEN
PAUL BREN
+
STEVE MORSELEY'S
SURVEY

009

+32

2/6

-

-

-

From PAULS → STEVE'S STATIONS

Ridge Cave Sump chamber (take II)

No	COMP	CLINO	TAPE	P.W	PH	S.H
0-1	132	-31	1/2			
1-2	113	+21	0/9			
2-3	128	+8	1/9			
3-4	202	-19	2/35			
4-5	222	+5	1/3			
6-5	065	-29	2/72			
6-7	241	-5	14/01	7/4	2	1/97 ← not which station??
7-8	200	-50	3/18	7/4	2	←
9-8	064	-2	17/8	-	-	←
9-10	216	+3	8/22	8	10	2 ←
11-10	072	-9	12/55	12	10	2 ←
11-12	224	-8	13/5	12	13	1/5 ←
13-12	089	-6	7/1	12	-	2/5 ←
13-14	293	-7	5/65	0/5	-	1/5 ←
15-14	121	+2	2/71	0/5	-	1/3 ←
15-16	332	+7	3/43	2/5	-	1/6 ←
16-17	239	0	3/45	3	-	1/6 ←

Boulder choke
squeeze

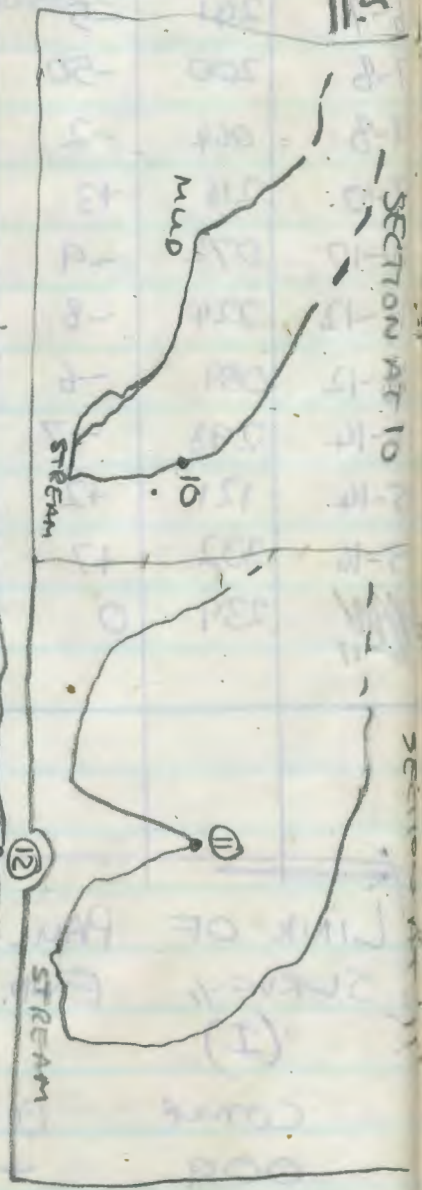
LINK OF PAUL BRENNAN SURVEY TO STEVE MAYERS SURVEY, END OF PAUL TO "BEGINNING" OF STEVE: (I) (into cave)

COMP 009 CLINO +32 TAPE 2/6

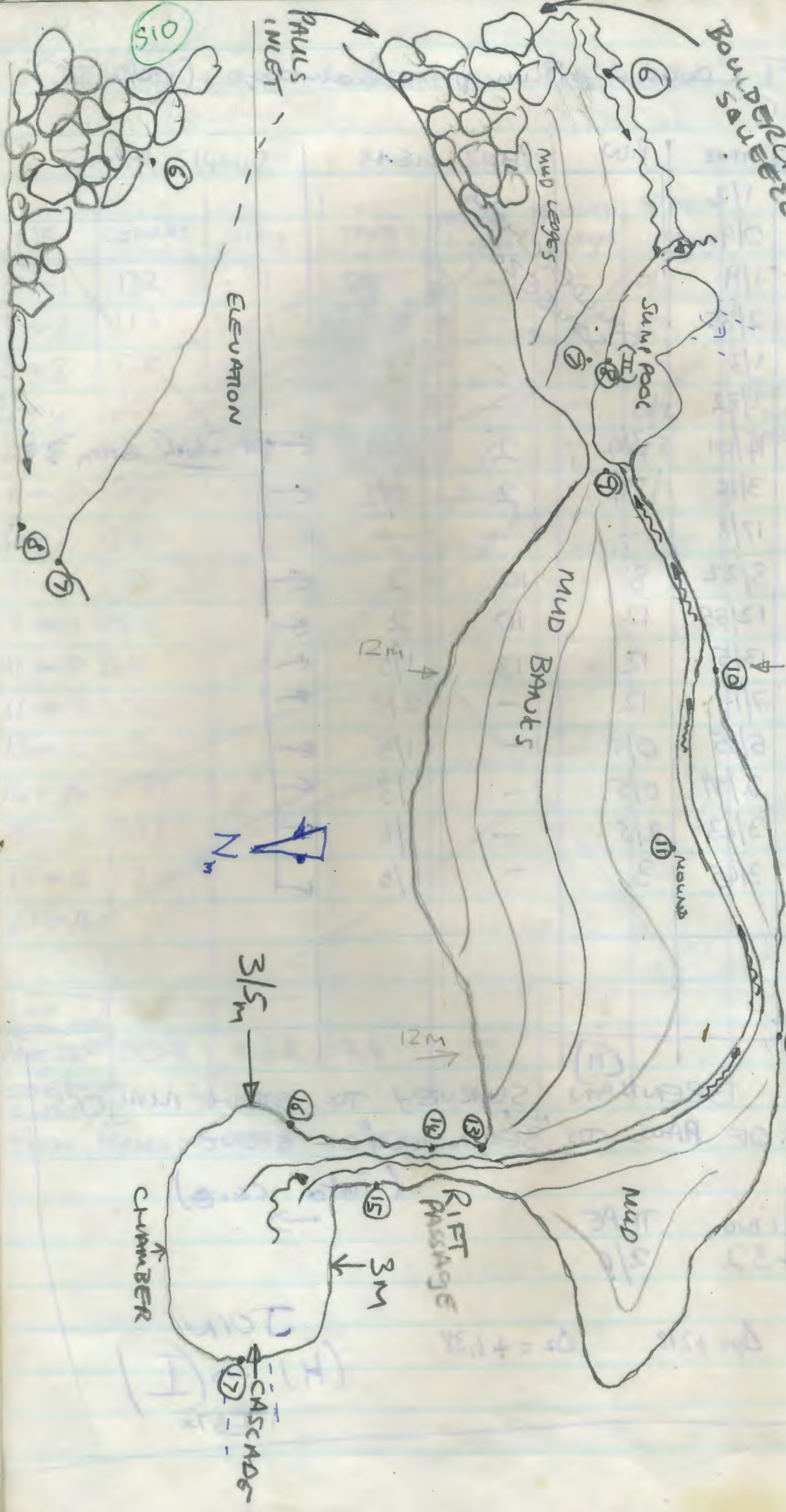
⇒ Δx = +0.34 Δy = +2.18 Δz = +1.38

JOIN (H) → (I) #67*

SUMP POOL CHAMBERS:



Boulder Choke
Boulder Sausage



0.5

ELEVATION

N

3/5m

3M

CASCADS

CHAMBER

RIPT PASSAGE

MUD

MUD BANKS

Sump Pool

MUD LEDES

PAULS INLET

SECTION AT 10

SECTION AT 11

STREAM

STREAM

MUD

MUD

11

11

10

12

6

7

8

9

6

4

7

16

14

13

15

17

0.5

N6 Survey Phil D & Dave H evaluated 31/7/86 by Gerhard relative to last year's limit of survey!!

S11

leg	tape	comp	clino	East Δx	North Δy	Up Δz	Station	x	y	z
0-1	1.20	132	-31	+0.76	-0.69	-0.62	0	-104.41	-45.70	-168.33
1-2	0.90	113	+21	+0.77	-0.33	+0.32	1	-103.64	-46.39	-168.95
2-3	1.90	128	+8	+1.58	-1.16	+0.26	2	-102.87	-46.72	-168.62
3-4	2.35	202	-12	-0.83	-2.06	-0.77	3	-101.38	-47.88	-168.36
4-5	1.30	222	+5	-0.87	-0.96	+0.11	4	-102.22	-49.94	-169.13
5-6	2.72	065	-29	+2.16	+1.01	-1.32	5	-103.08	-50.90	-169.01
6-7	14.01	241	-5	-12.21	-6.77	-1.22	6	-105.24	-51.90	-167.69
7-8	3.18	260	+50	-0.70	-1.92	-2.44	7	-117.45	-58.67	-168.91
8-9	19.80	064	-2	+15.99	+7.80	-0.62	8	-118.15	-60.59	-171.25
9-10	8.22	216	+3	-4.82	-6.64	+0.43	9	-134.13	-68.39	-170.73
10-11	12.55	072	-5	+11.79	+3.83	-1.96	10	-138.96	-75.03	-170.30
11-12	13.50	224	-8	-9.29	-9.62	-1.88	11	-150.75	-78.86	-168.34
12-13	7.10	089	-6	+7.06	+0.12	-0.74	12	-160.03	-88.58	-170.21
13-14	5.65	293	-7	-5.16	+2.19	-0.69	13	-167.09	-88.60	-169.57
14-15	2.71	121	+2	+2.32	-1.39	+0.09	14	-172.26	-86.41	-170.16
15-16	3.43	332	+7	-1.80	+3.01	+0.42	15	-174.58	-85.02	-170.26
16-17	3.45	239	0	-2.96	-1.78	0	16	-176.18	-82.01	-169.84
							17	-173.22	-80.23	-169.84

Trip 7 in Computer

Topographic Ocean

Some further station coordinates relative to last year's limit of survey.

Name	Date	Station	x	y	z	Notes
Phyllis, Paul B	29/7/86	station 17:	-27.27	+19.85	-102.65	(see above)
Steve Mayers	29/7/86	station 67:	-26.93	+22.03	-102.27	
"	"	station 65:	-26.95	+24.00	-107.66	
"	"	" 64:	-26.95	+24.00	-142.96	
"	"	" 34:	-59.60	+5.40	-157.82	
"	"	" 12:	-42.80	-18.76	-162.69	
"	"	1 legions (presumably ?) station 0 of Phil D & Dave H,				see this page

(512)

2/6 ENT. Measured from elevation

- P1 (station 0 → 5) 122 M
- P2 (8 → 12) 63
- P3 (12 → 15) 17
- P4 (19 → 20) 22
- P5 (L3 - L6) 75 (The Security)
- P6 (L8 - L11) 58

Station	Start	End	Dist	Height	Depth	Notes
0	0	5	122	122	0	
8	8	12	63	63	0	
12	12	15	17	17	0	
19	19	20	22	22	0	
L3	L3	L6	75	75	0	(The Security)
L8	L8	L11	58	58	0	

Survey trip
K on Computer

The surface link from Ridge Lane first survey station to 2/6 Lip of Shaft, according to my surface survey of last year, is
 dist, 135.5m bearing 228.5°
 ind, +30°
 $\Delta x = -76.5m$ $\Delta y = -89.3m$
 $\Delta z = +67.2m$ ($\pm 3m$)
 More accurate data to be obtained by Marcus Windhager this August. Ugerhand

"They numbers of the 1 big 1"

2/6 SURVEY.

24/7/86

CLINO 510270

COMPASS 514447

513

Book P. DUNCAN, INSTRUMENTS - D. HORSLEY, TAPE R. TAYLOR.

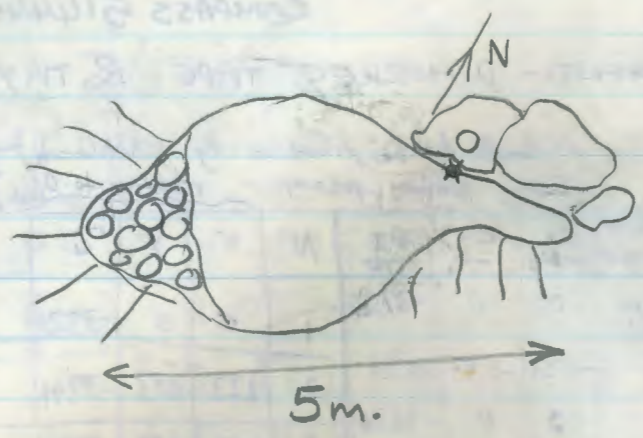
Station 0 = green splash (leg from lip of shaft to be filled in by G. Niklasch)
 Easting, Northing, pos. = up
 relative to 0 (not to lip of shaft)
 see below

No	COMP	CLINO	TAPE	P HEIGHT	P WIDTH	STATION HEIGHT	Δx	Δy	Δz	N°	X	Y	Z
0→1	—	-90	37/2	—	—	ENT	0	0	-37.20	1	0	0	-37.20
2→1	236	+8	1/5	—	3m	—	-1.23	-0.83	+0.21	2	1.23	0.83	-37.41
2→3	—	-90	46/2	—	—	—	0	0	-46.20	3	1.23	0.83	-83.61
3→4	066	-66	11/34	—	—	—	4.21	11.88	-10.36	4	5.45	2.71	-93.97
4→5	—	-90	24/35	—	—	—	0	0	-24.35	5	5.45	2.71	-118.32
6→5	238	+19	11/81	—	4m	0/2	-9.47	-5.92	+3.85	6	14.91	8.62	-122.16
6→7	356	+18	21/82	—	5m	0/7	-1.45	+20.70	+6.74	7	13.47	29.33	-115.42
7→8	211	-18	4/7	—	—	1/6	-2.30	-3.83	-1.45	8	11.17	25.59	-116.87
9→8	—	+90	29/4	—	—	—	0	0	+29.40	9	11.17	25.59	-146.27
9→10	040	+35	8/25	—	6m	2	44.34	45.18	+4.73	10	15.51	30.67	-141.54
10→11	—	-90	7/5	—	—	—	0	0	-7.50	11	15.51	30.67	-149.04
11→12	—	-90	29/15	—	—	—	0	0	-29.15	12	15.51	30.67	-178.19
13→12	221	-41	3/28	—	4m	F	-1.62	-1.87	-2.15	13	17.13	32.54	-176.04
13→14	082	-30	4/68	—	2m	—	44.01	+0.56	-2.34	14	21.15	33.10	-178.38
14→15	063	-68	18/5	—	1m	1/5	+6.17	+3.15	-17.15	15	27.32	36.25	-195.53
16→15	229	+6	4/63	—	1m	1m	-3.48	-3.02	+0.48	16	30.80	39.27	-196.02
16→17	030	-23	7/73	—	1/5m	1m	+3.56	+6.16	-3.02	17	34.35	45.43	-199.04
18→17	269	+50	4/17	—	1m	1/5	-2.68	-0.05	+3.19	18	37.03	45.48	-202.23
18→19	140	-35	1/21	—	1m	—	+0.64	-0.76	-0.69	19	37.67	44.72	-202.92
19→20	—	-90	21/77	—	—	—	0	0	-21.77	20	37.67	44.72	-224.69
21→20	239	+16	4/7	—	4m	—	-3.87	-2.33	+1.30	21	41.54	47.05	-225.99
21→22	348	-29	3/16	—	4m	1/5	-0.57	+2.70	-1.53	22	40.97	49.75	-227.52
23→22	—	+90	21/00	—	—	—	0	0	+21.00	23	40.97	49.75	-248.52
24→23	232	-40	2/02	—	4m	2	-1.22	-0.95	-1.30	24	42.19	50.70	-247.22
24→25	047	-59	12/1	—	—	—	+4.56	+4.25	-10.37	25	46.75	54.95	-257.60

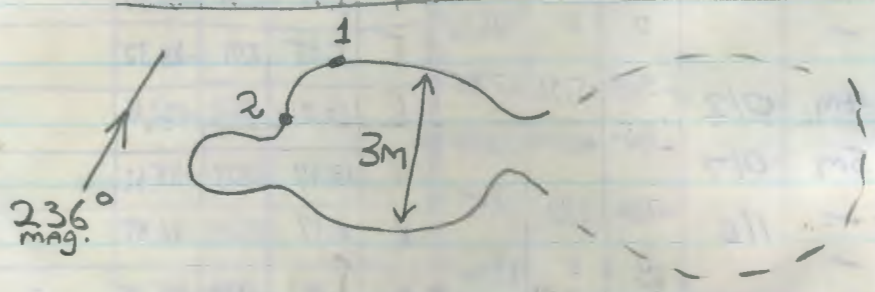
PS The leg from 26 lip of shaft (from which depth counts!) to the green splash is dist. 5.50m, bearing 230°, incl. -67°; $\Delta x = -1.65m$, $\Delta y = -1.38m$, $\Delta z = -5.06m$.
 Thus depth of station 25 is actually 262.66m, etc.

S14

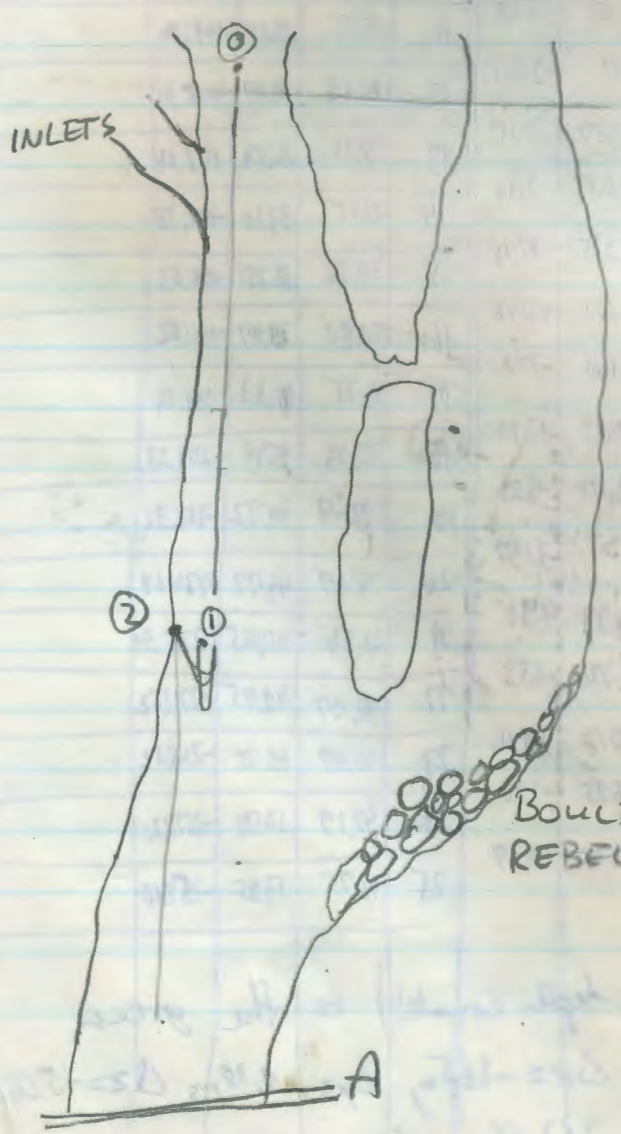
2/6 Drawings



PLAN VIEW AT STATION ①

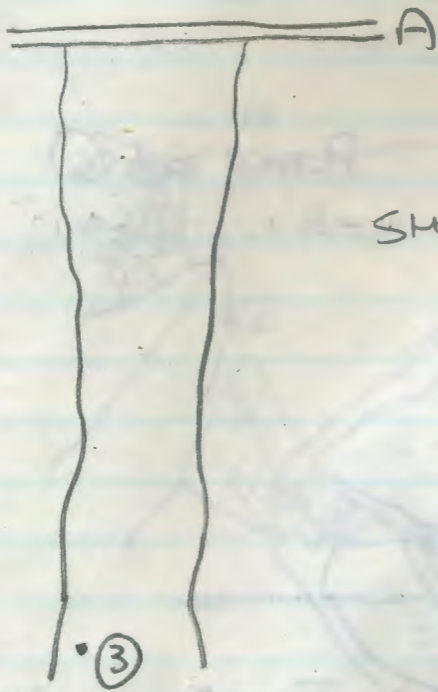


PLAN AT ①



ENT
SHAFT
AVERAGE WIDTH \approx 5m

BOULDER FLOOR \approx 10m BELOW
REBELAY AT ②



PLAN AT (3)



PLAN AT (4)

BOTTOM OF SHAFT.

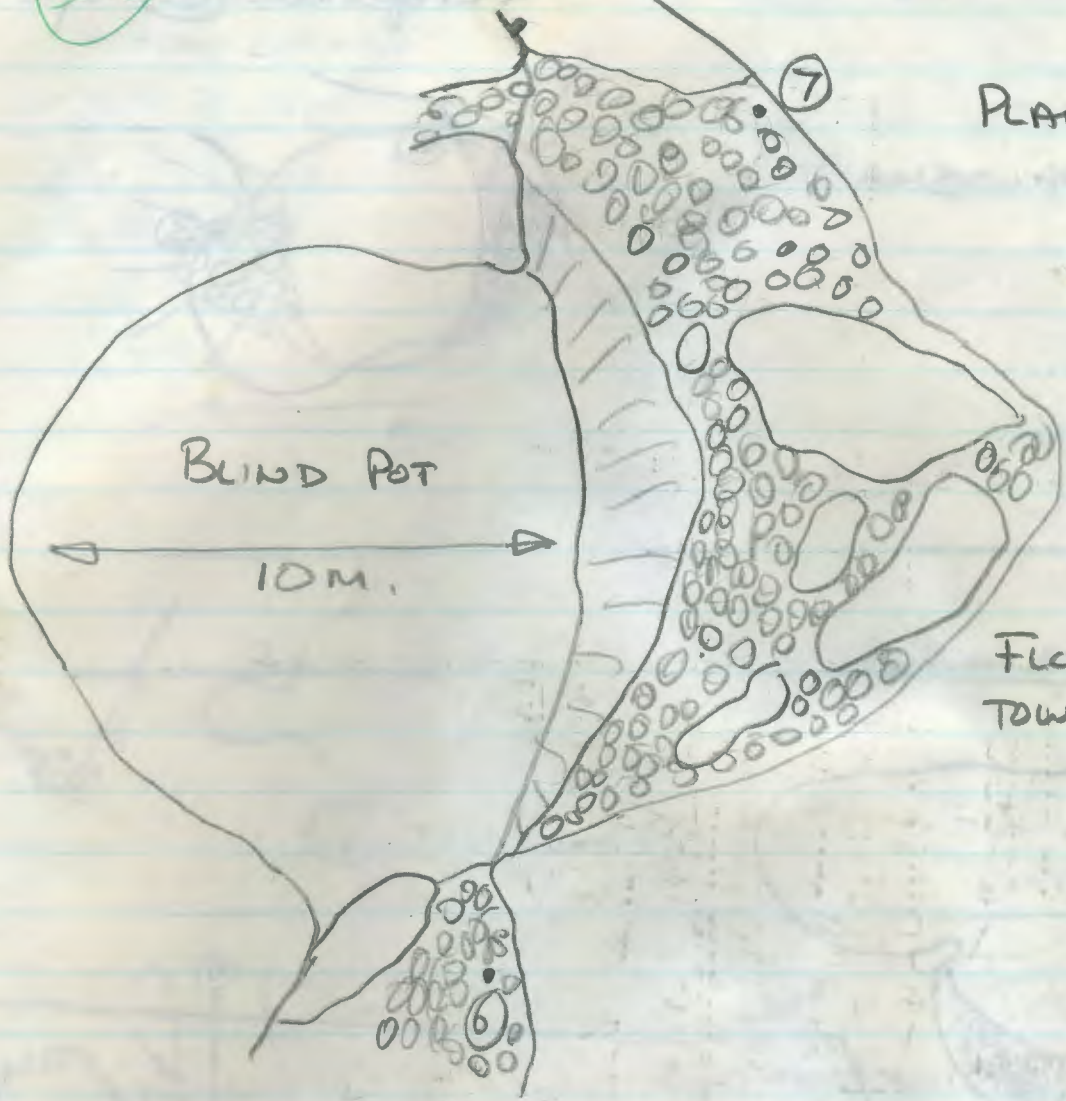
FLOOR OF SHAFT.



S16

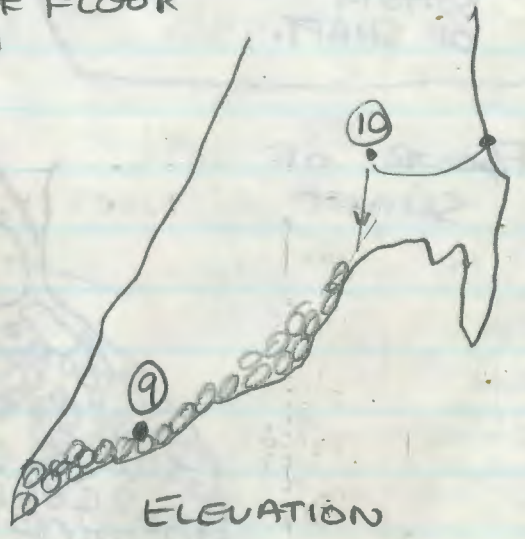
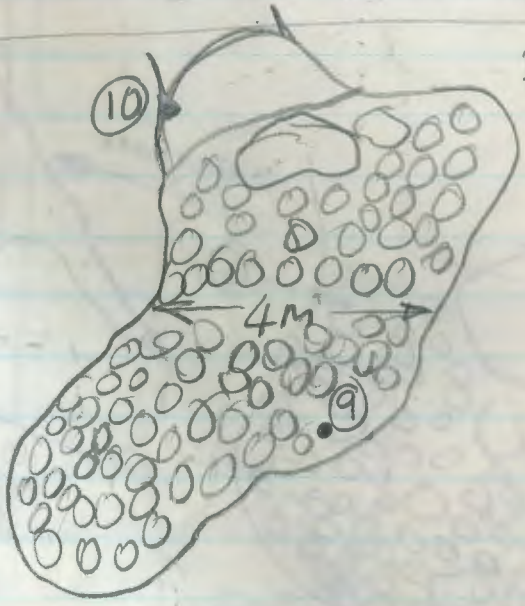
⑧ PATCH.

PLAN at ⑥



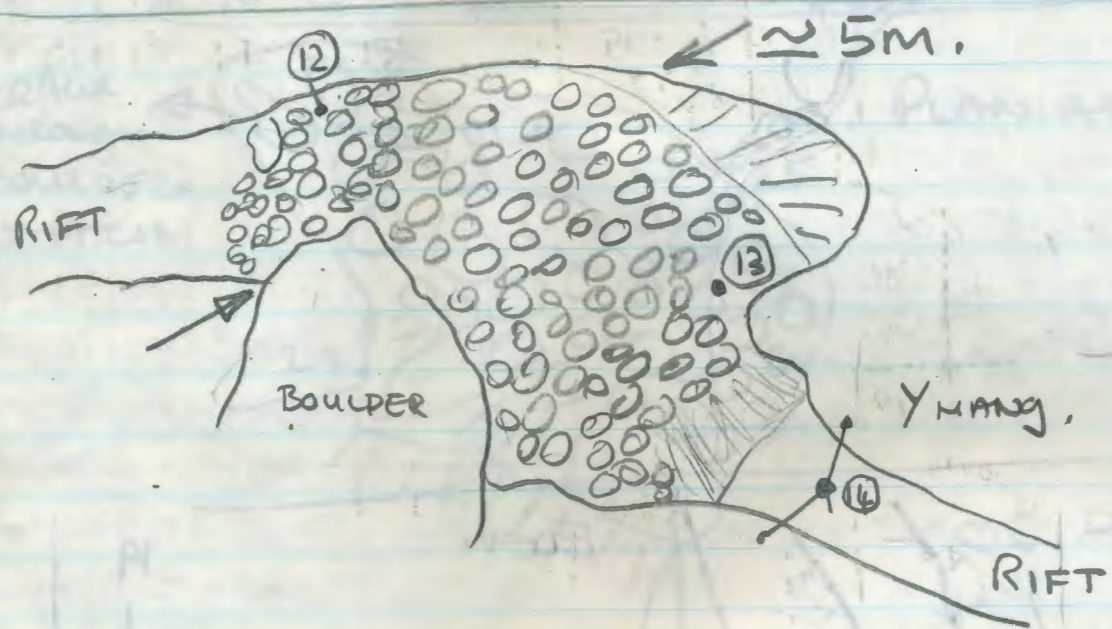
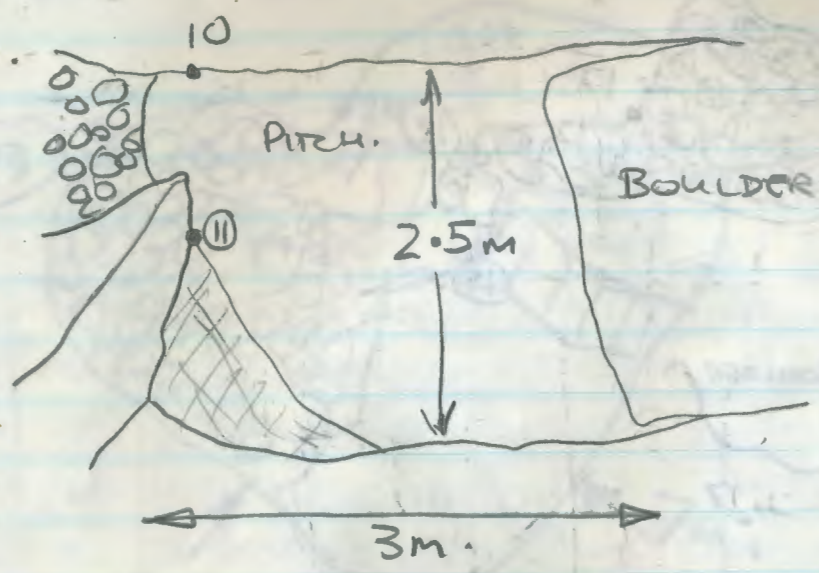
FLOOR SLOPING TOWARDS BLIND POT

PLAN OF FLOOR AT ⑨

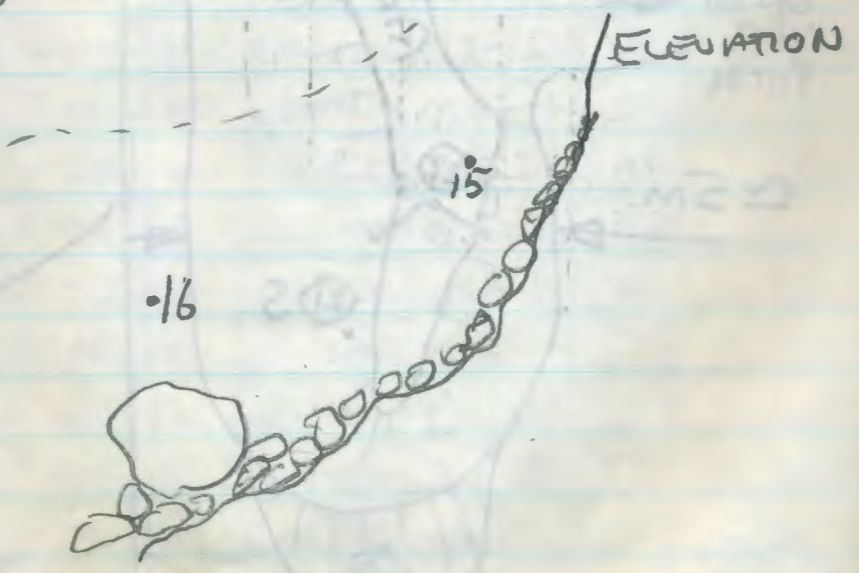
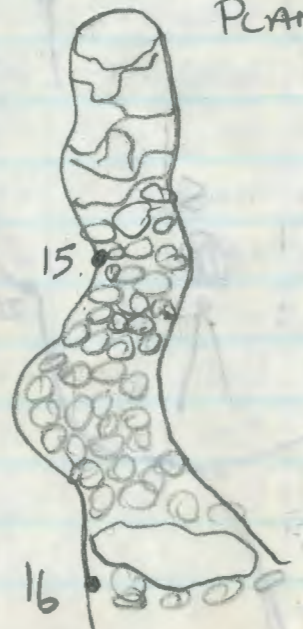


ELEVATION

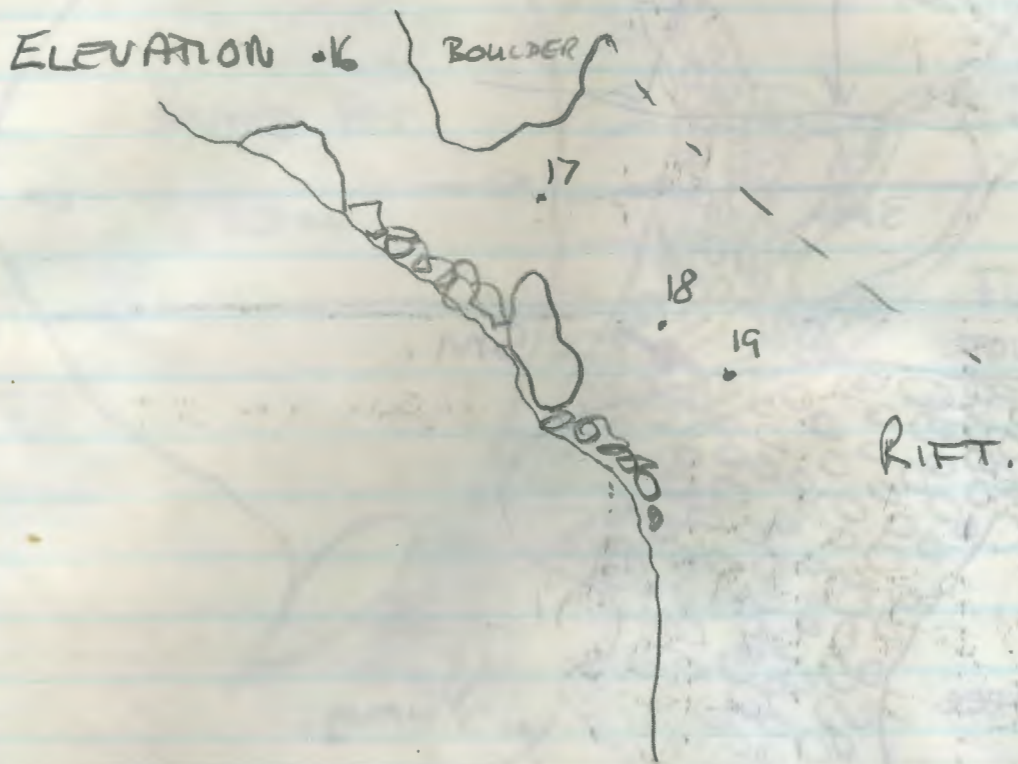
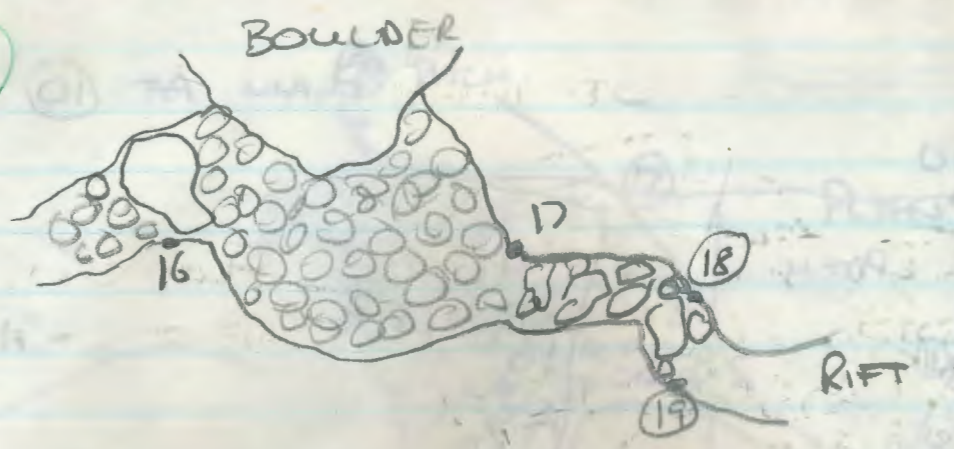
PLAN AT 10



PLAN AT 15



518

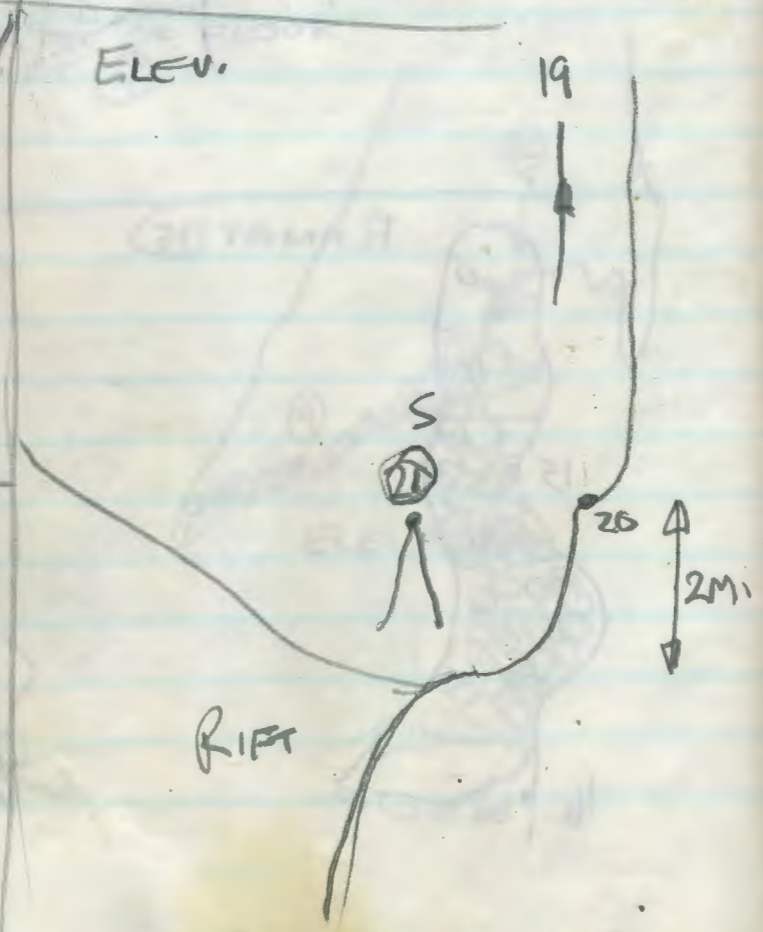
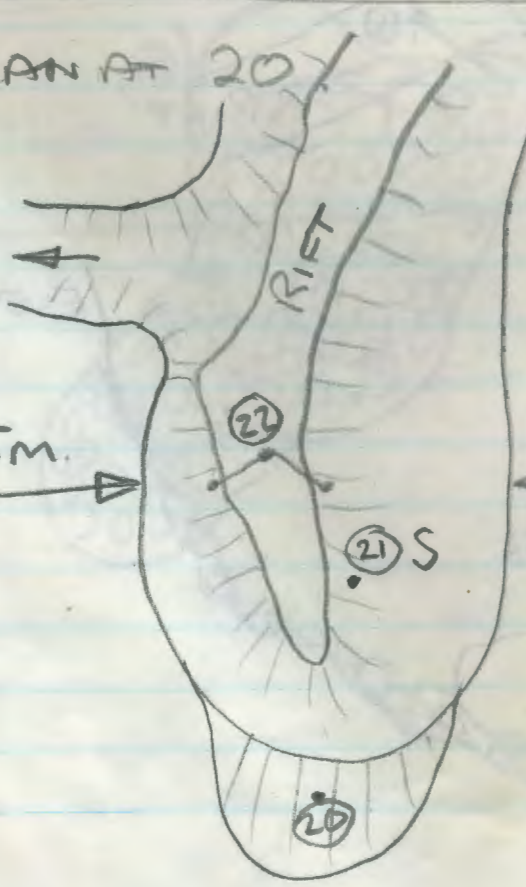


PLAN AT 20

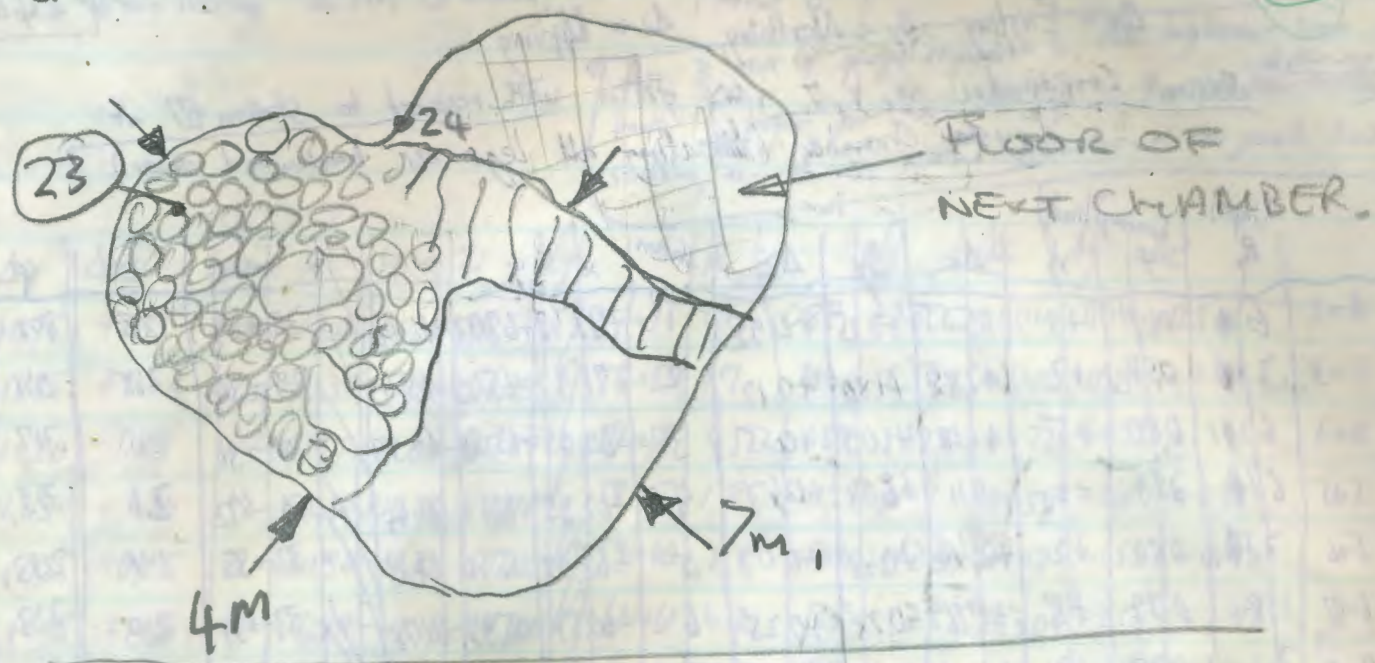
ELEV.

WAY ON TO NEXT PITCH

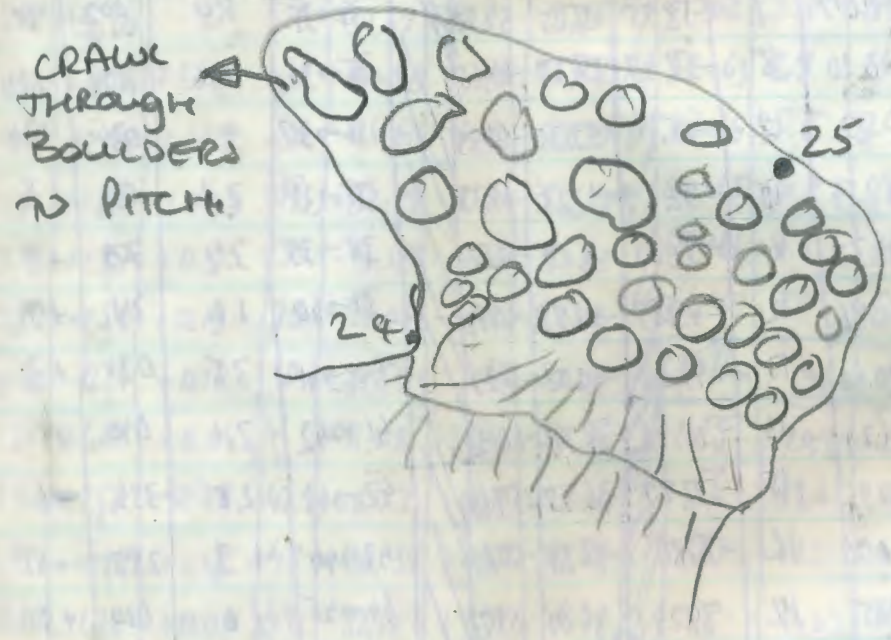
≈ 5m.



PLAN AT BOTTOM OF RIFT



PLAN AT 25



26/1/88

Evaluation of Ridge Cave survey Steve M. / Martin M.

(See above)

Summit to Crystal Chamber

By Gerhard & hp 5c

(520)

$\Delta x = \text{Easting}$, $\Delta y = \text{Northing}$, $\Delta z = \text{Upping}$

Station Coordinates x, y, z are given with respect to station 67 at Crystal Chamber (treating all legs as backward ones)!

	(loop) R	(bearing) P	(incl) S	Δx	Δy	Δz	station	x	y	z		R	P	S
1-2	6.4	067	+9	+5.55	+2.35	+0.95	summit	-77.48	-67.73	-66.06	28-29	2.8	304	+3
2-3	3.4	058	+2	+2.88	+1.80	+0.12	2	-71.93	-65.38	-65.11	29-30	2.5	041	+12
3-4	6.3	080	+5	+6.18	+1.03	+0.55	3	-69.05	-63.58	-64.99	30-31	2.5	317	-49
4-5	6.1	359	-4	-0.11	+6.08	-0.43	4	-62.87	-62.49	-64.44	31-32	2.1	359	+12
5-6	2.5	080	+2	+2.46	+0.43	+0.09	5	-62.97	-56.40	-64.86	32-33	1.4	293	-2
6-7	1.8	099	+8	+1.76	-0.28	+0.25	6	-60.51	-55.97	-64.78	33-34	2.0	323	+66
7-8	2.1	037	+2	+1.26	+1.68	+0.07	7	-58.75	-56.25	-64.53	34-35	5.0	002	0
8-9	5.7	024	+1	+2.32	+5.21	+0.10	8	-57.49	-53.57	-64.45	35-36	2.6	294	+27
9-10	7.7	022	0	+2.88	+7.14	0	9	-55.17	-49.37	-64.35	36-37	3.4	034	+24
10-11	2.8	322	+6.5	-0.73	+0.93	+2.54	10	-52.29	-42.23	-64.35	37-38	2.1	039	+8
11-12	7.3	086	+11	+7.15	+0.50	+1.39	11	-53.02	-41.29	-61.82	38-39	3.2	309	+3
12-13	2.2	067	-26	+1.82	+0.77	-0.96	12	-45.87	-40.79	-60.42	39-40	1.6	341	+7
13-14	3.8	072	+7	+3.59	+1.17	+0.46	13	-44.05	-40.02	-61.39	40-41	3.5	094	+3
14-15	3.8	048	+19	+2.67	+2.40	+1.24	14	-40.46	-38.86	-60.92	41-42	2.1	040	+1
15-16	2.4	061	-23	+1.93	+1.07	-0.94	15	-37.79	-36.45	-59.69	42-43	2.8	334	+6
16-17	2.3	050	+23	+1.62	+1.36	+0.90	16	-35.86	-35.38	-60.63	43-44	1.9	283	+51
17-18	1.7	078	-30	+1.44	+0.31	-0.85	17	-34.24	-34.02	-59.73	44-45	1.6	030	+3
18-19	6.6	082	-4	+1.58	+0.22	-0.11	18	-32.80	-33.71	-60.58	45-46	2.2	320	+42
19-20	2.1	352	+2	-0.29	+2.08	+0.07	19	-31.21	-33.49	-60.69	46-47	1.1	007	+6
20-21	1.9	032	+4	+1.00	+1.61	+0.13	20	-31.57	-31.41	-60.62	47-48	3.1	038	+23
21-22	1.9	308	+48	-1.00	+0.78	+1.41	21	-30.50	-29.81	-60.48	48-49	1.1	064	+20
22-23	3.7	267	-4	-3.69	-0.19	-0.26	22	-31.50	-29.02	-59.07	49-50	1.4	024	0
23-24	1.3	349	+8	-0.25	+1.26	+0.18	23	-35.19	-29.22	-59.33	50-51	2.2	101	+60
24-25	2.8	082	-1	+2.77	+0.39	-0.05	24	-35.44	-27.25	-59.15	51-52	3.1	081	+47
25-26	1.5	113	+35	+1.13	-0.48	+0.88	25	-32.66	-27.56	-59.20	52-53	2.5	101	+45
26-27	2.7	038	+32	+1.41	+1.80	+1.43	26	-31.53	-28.04	-58.34	53-54	4.6	023	+8
27-28	2.1	032	+10	+1.10	+1.75	+0.36	27	-30.12	-26.24	-56.91	54-55	1.8	112	+18

The gap at Crystal Chamber to be filled in 26/9/86 by
 Dave Horsley & Phil Duncan. (about 6'?)

821

This is out of page sequence in the logbook - turn
 back 5 pages for the linkings to the previous survey
 sections, as well as for station coordinates w.r.t. last year's limit!

Δx	Δy	Δz	Station	X	Y	Z	Station	R	α	β	Δx	Δy	Δz
-2.32	+1.56	+0.15	28	-29.03	-24.48	-56.54	55-56	1.2	088	+28	+1.06	+0.04	+0.56
+1.60	+1.85	+0.52	29	-31.35	-22.92	-56.39	56-57	1.7	104	+32	+1.40	-0.35	+0.90
-1.12	+1.20	-1.89	30	-29.74	-21.08	-55.87	57-58	4.5	087	+20	+4.22	+0.22	+1.54
-0.04	+2.05	+0.44	31	-30.88	-19.88	-57.46	58-59	1.8	119	+4	+1.52	-0.87	+0.13
-1.29	+0.55	-0.05	32	-30.30	-17.82	-57.32	59-60	2.1	145	+26	+1.08	-1.55	+0.92
-0.49	+0.65	+1.83	33	-32.18	-17.28	-57.38	60-61	4.2	125	+28	+3.04	-2.13	+1.97
+0.17	+5.00	0	34	-32.67	-16.63	-55.55	61-62	3.3	117	+24	+2.69	-1.37	+1.34
-2.12	+0.94	+1.18	35	-32.50	-11.63	-55.55	62-63	8.9	142	+78	+1.01	-1.55	+8.71
+1.74	+2.58	+1.38	36	-34.61	-10.69	-54.37	63-64	5.8	120	+23	+4.62	-2.67	+2.27
+1.31	+1.62	+0.29	37	-32.88	-8.11	-52.98	64-65	16.8	(0)	+90	0	0	+16.8
-2.48	+2.01	+0.17	38	-31.57	-8.50	-52.69	65-66	6.6	220	+45	-3.00	-3.58	+4.67
-0.52	+1.50	+0.19	39	-34.05	-4.48	-52.52	66-67	3.5	062	+12	+3.02	+1.64	+0.73
+3.49	-0.24	+0.18	40	-34.57	-2.98	-52.33	Station	X	Y	Z	XXXXXXXXXX		
+1.35	+1.61	+0.04	41	-31.08	-2.23	-52.15	55	-20.42	+12.19	-40.53			
-1.22	+2.50	-0.29	42	-29.73	-1.62	-52.11	56	-19.65	+12.23	-39.92			
-1.17	+0.87	+1.48	43	-30.95	+0.88	-52.40	57	-18.25	+4.88	-38.07			
+0.80	+1.38	+0.08	44	-32.12	+1.15	-50.92	58	-14.03	+12.00	-37.53			
-1.05	+1.25	+1.47	45	-31.32	+2.54	-50.84	59	-12.46	+4.23	-37.40			
+0.13	+1.09	+0.12	46	-32.37	+3.79	-49.37	60	-11.38	+8.68	-36.48			
+1.76	+2.25	+1.21	47	-32.24	+4.88	-49.25	61	-8.34	+7.56	-34.57			
+0.93	+0.45	+0.38	48	-30.48	+7.12	-48.04	62	-5.65	+6.19	-33.17			
+0.57	+1.28	0	49	-29.55	+7.58	-47.67	63	-4.65	+4.64	-24.46			
+1.08	-0.21	+1.91	50	-28.98	+8.86	-47.62	64	-0.02	+6.97	-22.19			
+2.09	+0.33	+2.27	51	-27.90	+8.65	-45.76	65	-0.02	+1.97	-5.39			
+1.74	-0.34	+1.77	52	-25.81	+8.98	-43.49	66	-3.02	-1.61	-0.73			
+1.78	+4.19	+0.64	53	-24.08	+8.64	-41.73	67	0	0	0			
+1.59	-0.64	+0.56	54	-22.30	+12.83	-41.09	Crystal Chamber						

Where are Dave's and Phil's survey notes?? ~~copy~~, found them way back.

522

Summary of 2/6 Connection to Ridge

2/8/86

P Cooper Book
R Geyser Instruments
& Naylor Tape

Climo 510270
Compass 514447

Survey Trip L
on Computer

Start of survey is large S on peak at head of Split Creek
Final station is top of boulder directly below Pine Pitch. No mark
could be found but this point is the landing for the pine pitch.

	Compass	Climo	Tape	Station	Passage ht	P.W. All	Station ht.
1 → 2	158°	-15°	5.2 m	1	?	1 m	1.4
1 → 2	248	-25	4.85	2	?	0.75	1.7
3 → 2	129	-14	2.0	3	?	0.5	?
3 → 4	217	-84	15.65	4	?	?	?
4 → 5	351	-38	1.2	5	?	?	?
5 → 6	0	-90	60.3	6	75	15	0
7 → 6	630	+37	10.7	7	"	"	0
7 → 8	239	-65	9.45	8	85	12	?
9 → 8	141	+62	15.1	9	?	?	1
9 → 10	009	-65	26.8	10	?	?	?
10 → 11	0	-90	21.4	11	?	2	0
12 → 11	147	-8	5.75	12	?	2	1.8
12 → 13	300	-48	10.1	13	?	1	1.5
14 → 13	153	+17	2.6	14	?	1	?
14 → 15	028	+19	7.5	15	?	2.5	3
16 → 15	150	-40	5.2	16	?	1	1.8
16 → 17	330	-3	5.7	17	?	1	?
18 → 17	175	-30	4.6	18	?	1	?
18 → 19	004	+5	6.3	19	?	0.5	?
20 → 19	195	-16	8.0	20	?	1	?
20 → 21	37°	+23	11.65	21	?	1.5	0

	Compass	Climb	Tape	Station	PH	PW	SH
22 → 21	190	-32	9.6	22	?	2m	1.8
22 → 23	38	-59	26.6	23	?	?	1.5
24 → 23	15	+30	15.9	24	?	?	0.5

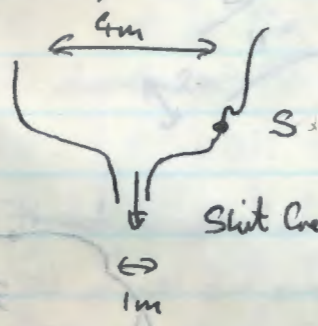
NB 26m legs at an inclination of -59° are bound to produce several metres horizontal error! Compliments - yaband.

Notes Station 5 is built at rebelay of 60m pitch.
2m climb down between stations 12-13

Procedures

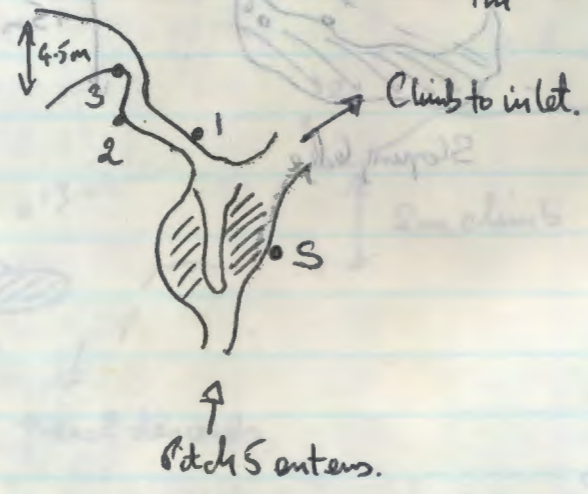
Slit Creek

(Section)

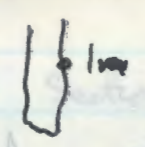


Slit Creek pitch descends.

(Plan)

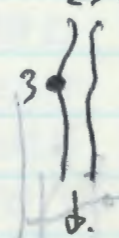


Section at 1

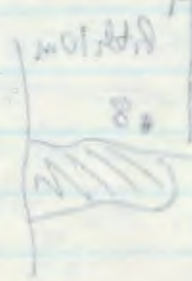


1.4m

Section at 3



Pitch 6 descends

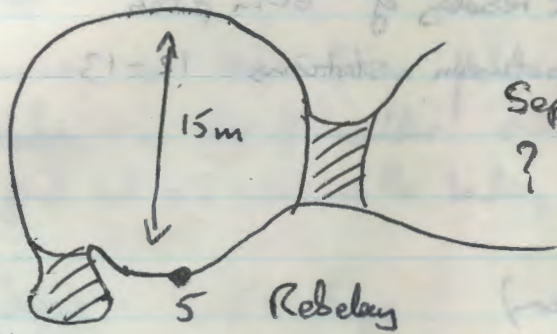


219
(5 down)

G24

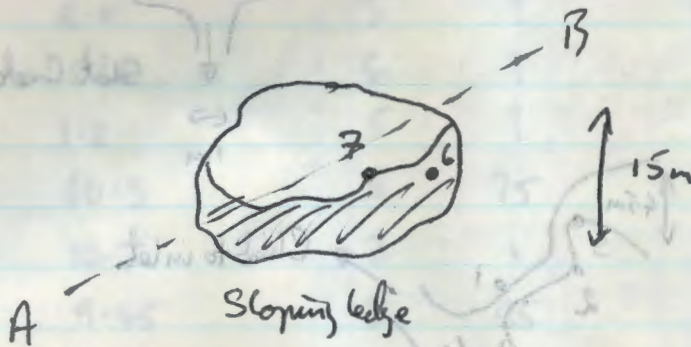
Plan at level of bolt rebelay (Station 5)

15m down shaft from top of pitel.
Shaft is in 2 hangs of 15m and 60m.

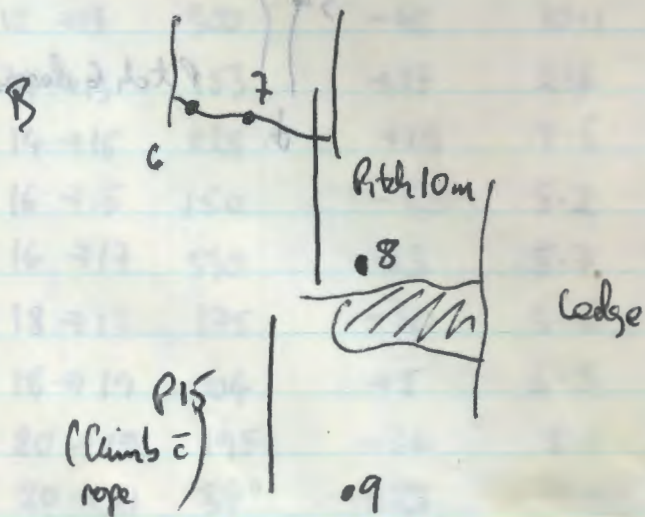


Small ledge immediately below top take off

Plan at base of pitel



Section on A-B

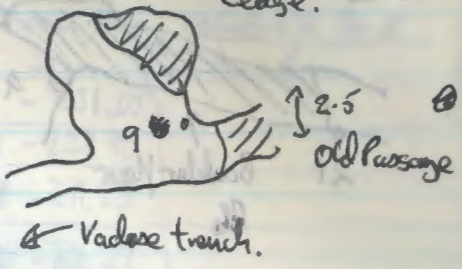
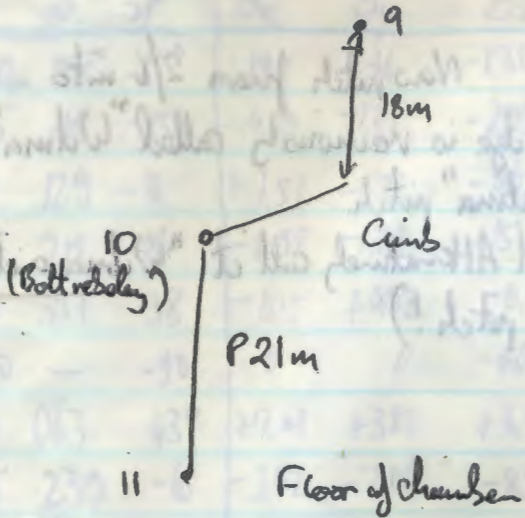


Station 9 is 3m to (B) of second rebelay after big ledge of station 6.

B

A

Plan at 9

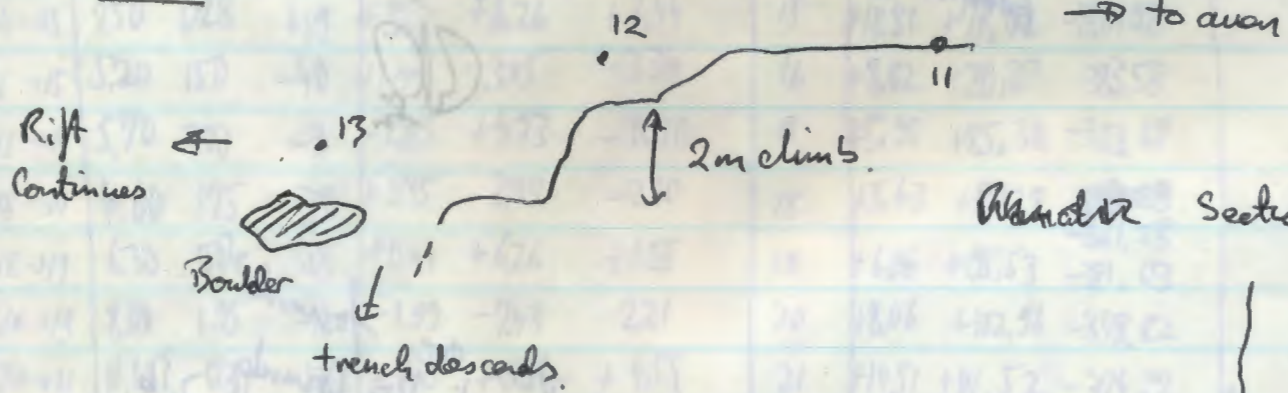


Plan at 11

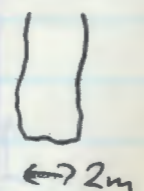


After station 11 route enters vadose trench.

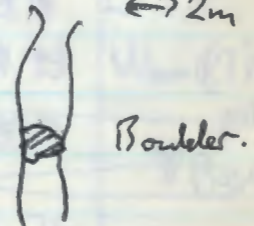
Section



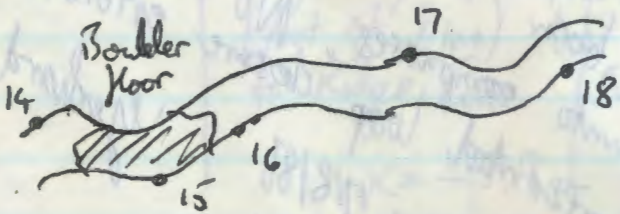
Section at 12



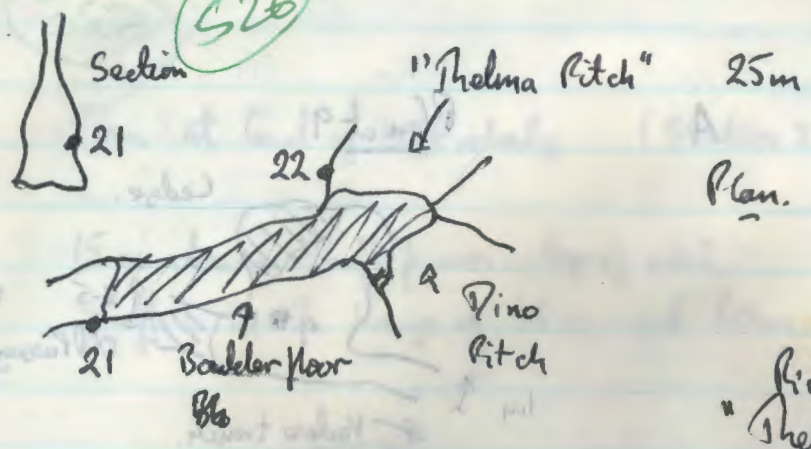
Section at 13



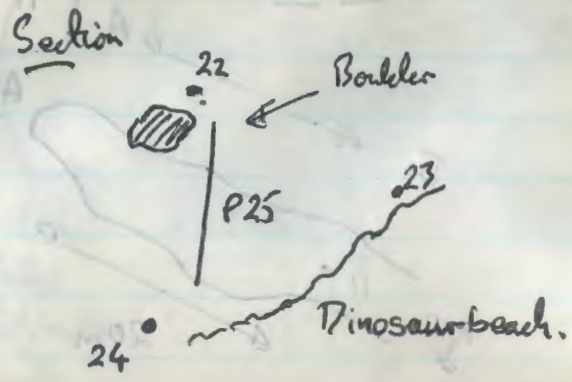
Still decorated vadose trench continues from stations 13 to 21



G26



Now pitch from 2/6 into
 ridge is variously called "Wilma" or
 "Thelma" pitch.
 (Alternatively call it "Wilma and Thelma
 pitch!")



24 is boulder at foot of Dino pitch. Couldn't find any
 survey stations but this is the boulder that leads on.
 (Station C15 of RIDGE on computer, leg 73)

PS: The red/brown iron ore found
 abundantly in D'Beach, Big Crumby
 Big Beluga etc. in some parts of 2/6
 has been tested not to effect.
 Sumto compasses. No excuse for
 horizontal loop closure errors!!
 7/8/86 Usherford

m

Evaluation of above 26 survey

7/18/86

S27

Begins at head of Slit Creek, station 21 of previous survey
 (marked 'S' on the wall)

Leg	R	φ	Z	Ent			Station	Coordinates now given			relative to top of shaft
				Δx	Δy	Δz		x	y	z	
1→5	5.20m	158°	-15°	+1.88	-3.66	-1.35	① - previous 21	+39.89	+45.67	-231.05	
1→2	6.85	248	-25	-4.08	-1.65	-2.05	1	+38.01	+50.33	-229.70	
3→2	2.00	129	-4	+1.51	-1.22	-0.48	2	+38.93	+48.68	-231.75	
3→4	15.65	217	-84	-0.98	-1.31	-15.56	3	+32.52	+49.90	-231.27	
4→5	1.20	351	-38	-0.15	+0.93	-0.74	4	+31.44	+48.60	-246.83	
5→6	60.30	—	-90	0	0	-60.30	5	+31.29	+49.53	-247.57	
7→6	10.70	063	+37	+7.61	+3.88	+6.44	6	+31.29	+49.53	-307.87	100m' pitch
7→8	9.45	239	-65	-3.62	-2.06	-8.56	7	+23.68	+45.65	-314.31	and its
9→8	15.10	147	+62	+4.46	-5.51	+13.33	8	+20.28	+43.59	-322.88	Successors
9→10	26.80	009	-65	+1.77	+1.19	-24.29	9	+15.79	+49.10	-336.21	
10→11	21.40	—	-90	0	0	-21.40	10	+17.57	+60.29	-360.50	
12→11	5.75	147	-8	+3.10	-4.78	-0.80	11	+17.57	+60.29	-381.90	
12→13	10.10	300	-48	-5.85	+3.38	-7.51	12	+14.46	+65.06	-381.10	
14→13	2.60	153	+17	+1.13	-2.22	+0.76	13	+8.61	+68.44	-388.60	decorated ribs
14→15	7.50	028	+19	+3.33	+6.26	+2.44	14	+7.48	+70.66	-389.36	
16→15	5.20	150	-40	+1.99	-3.45	-3.34	15	+10.81	+76.92	-386.92	
16→17	5.70	330	-3	-2.85	+4.93	-0.30	16	+8.82	+80.37	-383.58	
18→17	4.60	175	-30	+0.35	-3.97	-2.30	17	+5.97	+85.30	-383.88	
18→19	6.30	004	+5	+0.44	+6.26	+0.55	18	+5.63	+89.27	-381.58	
20→19	8.00	195	-16	-1.99	-7.43	-2.21	19	+6.06	+95.53	-381.03	
20→21	11.65	037	+23	+6.45	+8.56	+4.55	20	+8.06	+102.96	-378.82	
22→21	9.60	190	-32	-1.41	-8.02	-5.09	21	+14.51	+111.52	-374.27	
22→23	26.60	058	-59	+8.43	+10.80	-22.80	22	+15.92	+119.54	-369.18	
24→23	15.90	015	+30	+3.56	+13.30	+7.95	23	+24.36	+130.33	-391.99	William (J) Dehman pitch D. Beach
							24	+20.79	+117.03	-399.94	

Using last year's surface survey, the last station 24 (foot of Dino) has coordinates with respect to Ridge Cave Survey Station 0:

$$x = -55.7m \quad y = +27.7m \quad z = -332.7m$$

I lack last year's data at the moment, but this looks not too much out! Congratulations,
 Ugerhard

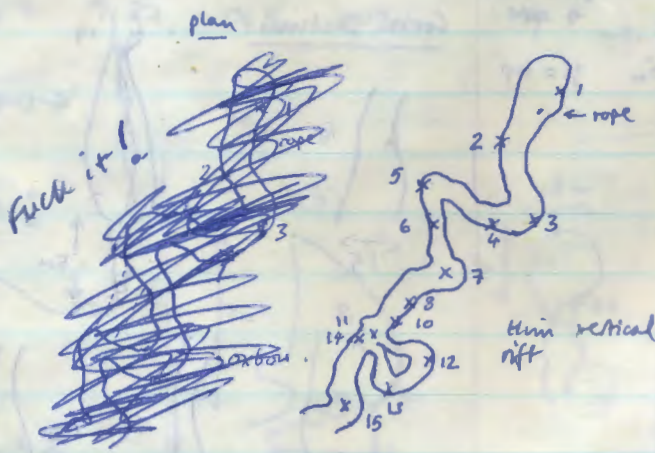
F20 Survey 1986 - beginning at survey station at end of '85 survey
ie bottom of pitch below calamity Jane

Danell (tape), Fred (instr), Richard (book)

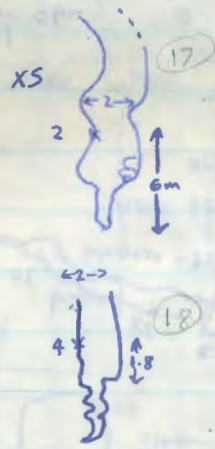
5-7 August 1988

S → S	Tape	Bearing	Inclination	Pw	Above floor.
1 → 2	8.10	149	+27	2m	1=1985 point, 2=4m.
3 → 2	7.45	294	-14	2.5	3=5m
3 → 4	6.25	174	+51	2	5
5 → 4	9.10	349	-39	2	5= standing height (HH) from ledge.
5 → 6	3.88	070	-28	1	6= knot secondary.
7 → 6	5.35	223	+69	1	7 on semi pitch = diagonal abseil.
7 → 8	5.97	100	-47	1	8 below rebelay.
18 → 9	6.30	0	-90	1	
10 → 9	4.10	figure uncreadable ? = 06	+59	0.5	thin rift bearing difficult but v. steep Entered as '206' SGA
11 → 10	2.10	0	+04		
12 → 11	2.81	244	+16		5m below
13 → 12	2.24	290	+45	0.5	
14 → 13	4.9	42	+44	0.5	

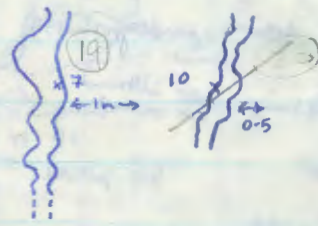
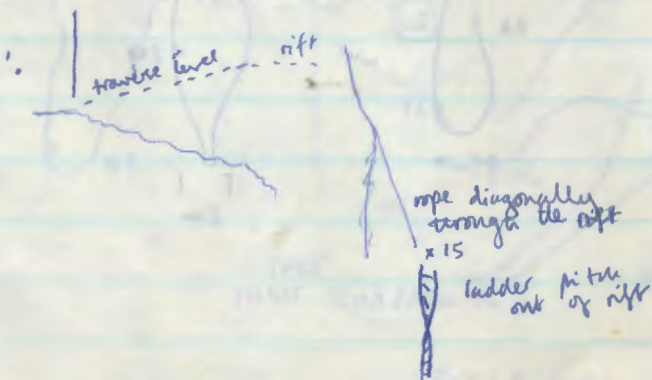
(M)



Xsections



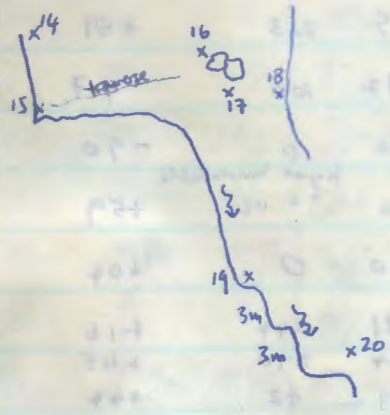
Rough Elevation from memory



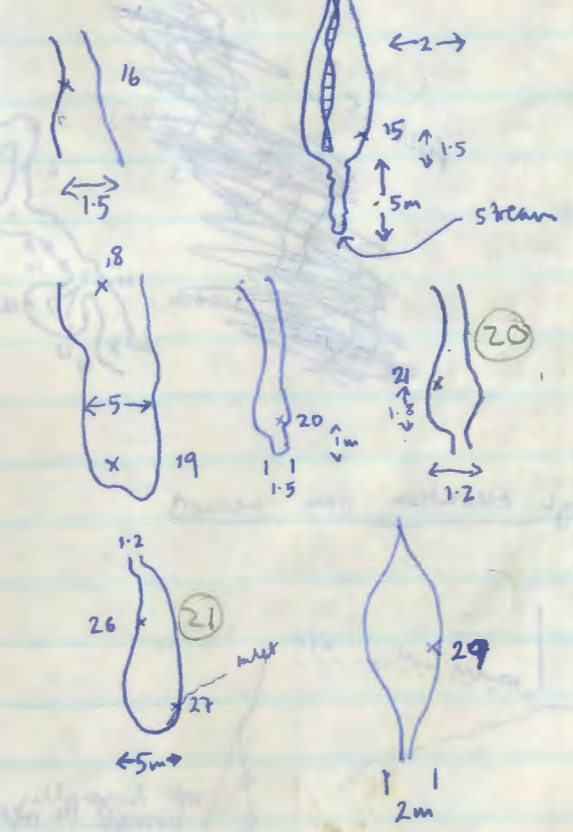
S→S	Time	Bearing	Inclination	Dist	above floor
14→15	11.59	137	-79	2m	14 = ladder 15 see below 16 up in pit
16→15	10.84	42	-41	1.5m	
16→17	5.53	114	+64	1.0	
17→18	1.78	96	-16	5m	
19→18	24.25	0	+90	5m	19 = 1.8m above floor
20→19	13.14	253	+43	1.5m	20 = 1m
20→21	9.84	184	+13	1.2	1.8 above a ledge
22→21	5.70	027	-13	1.2	top of a pit
22→23	6.95	217	-71		23 = 5m above the stream
24→23	1.38	299	+33	0.5	24 = 5m
24→25	2.84	157	-58	0.5	25 = 2° slope
25→26	8.10	183	-65	2m	
27→26	23.50	286	+75	5m	27 on the floor
27→28	7.15	032	-41	1.5m	
29→28	2.10	122	-10	1.5m	
29→30	5.32	351	-18	2m	30 = bottom of rope
31→30	15.45	0	-90	5m	ie pit up 31 = top



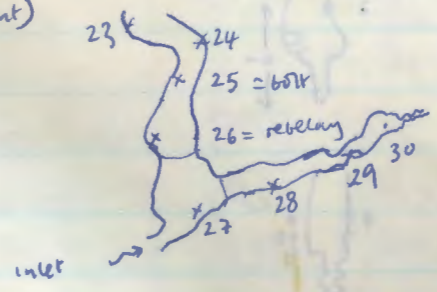
Elevation (drawn in cave)



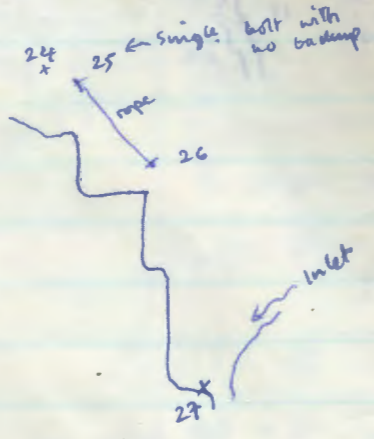
Cross Sections



Plan (cont)



Elevation (again drawn underground!)

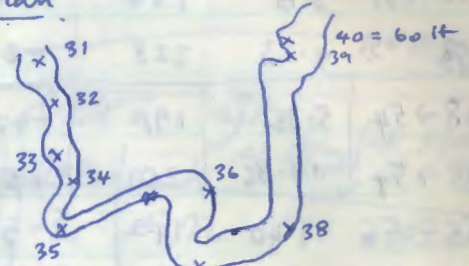


P20 (cont).

S30

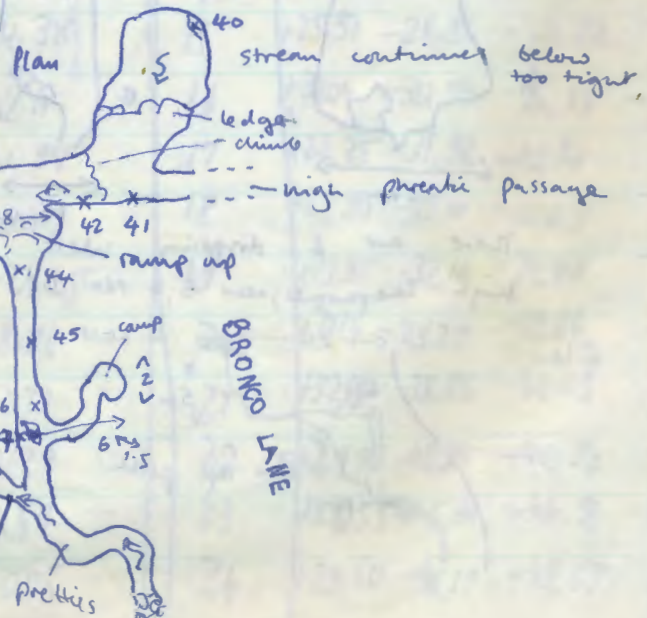
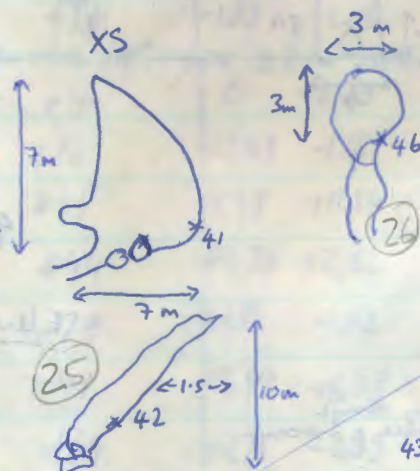
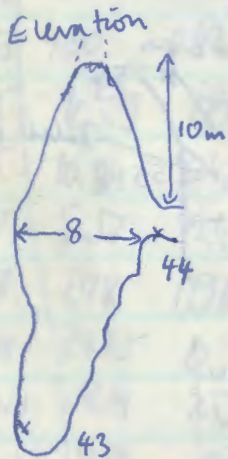
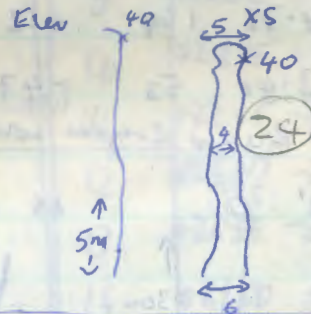
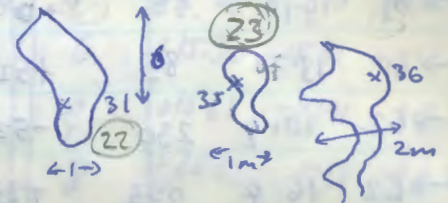
S→S	Time	bearing	Inclination	Av	above floor	below roof
32→31	2:33	146	-03	1.5	Night in	31 = 6m
32→33	2:35	043	+04	1.0	Amnesia ∴ no floor	32 = 4m
34→33	3:09	159	+19	1.0	phreatic tube with moose trench below	33 = 2m
34→35	3:44	042	-18	1.0		34 = 1m 35 = 0m 36 = 1m
36→35	5:05	128	+4	1.0		
36→37	3:33	320	+4	2m		37 = 1m
38→37	2:89	198	+30	1m		
38→39	10:38	297	-11	1.5m		
39→40	0:68	345	+8	1.5m		
40→41	13:80	017	-52	7m		
42→41	3:90	266	-31	2m		
42→43	10:45	66	-2	3m		
44→43	25:48	176	-62	2m at 0.62m 43		
44→45	16:42	49	+7	2m		
46→45	11:33	254	+9			
46→47	9:27	045	+12	4		

Plan



Night in Amnesia - what a terrible name!

XS



THE HIGH CHAPARRAL

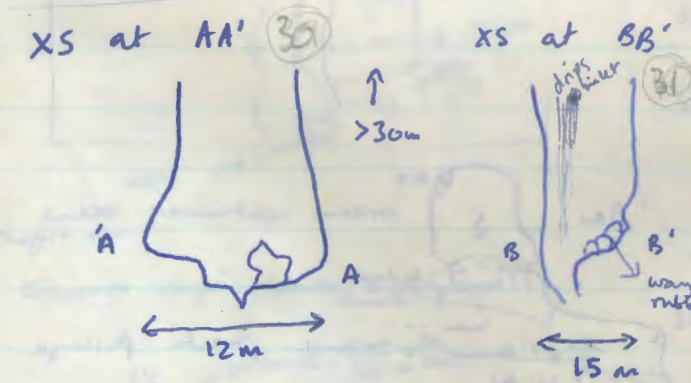
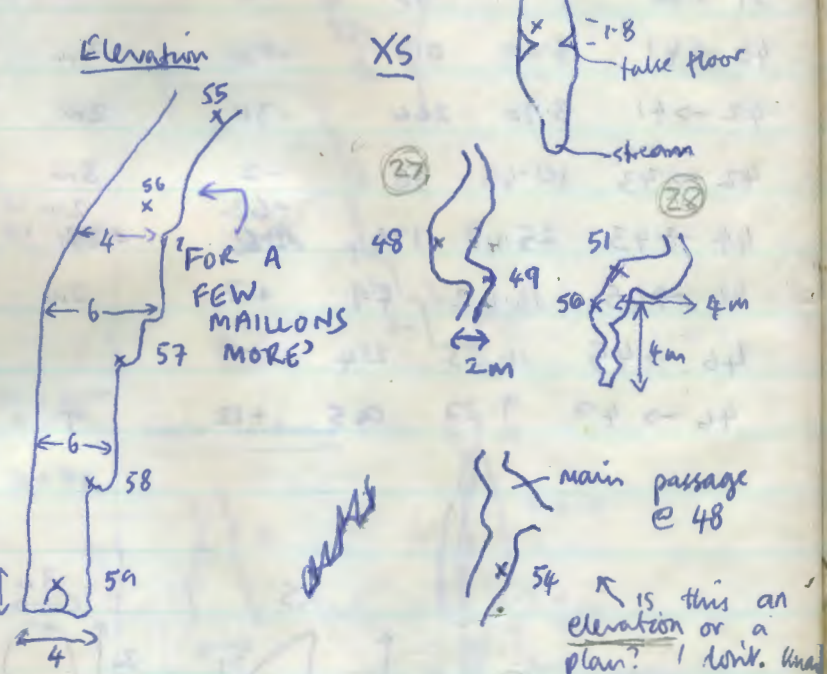
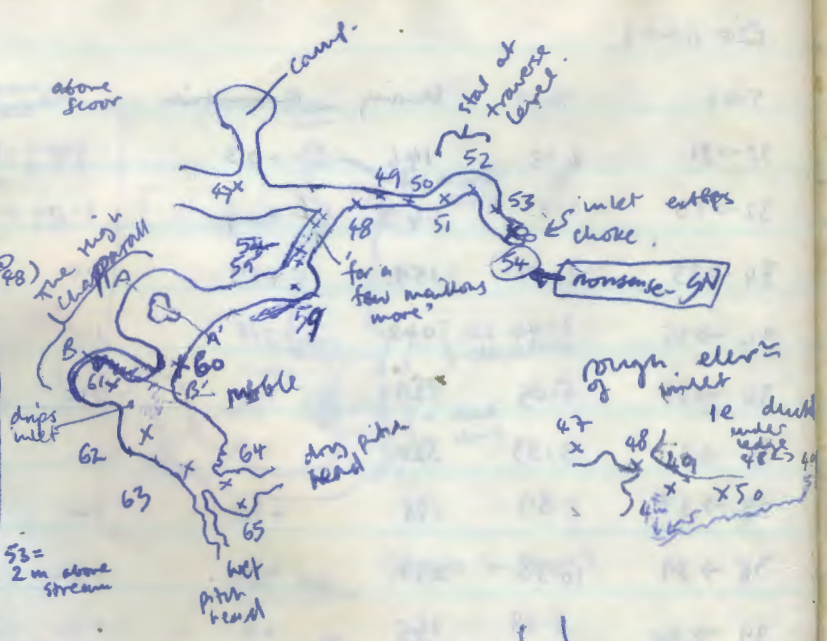
SEE OVER

FOR A FEW
MILLIONS
MORE

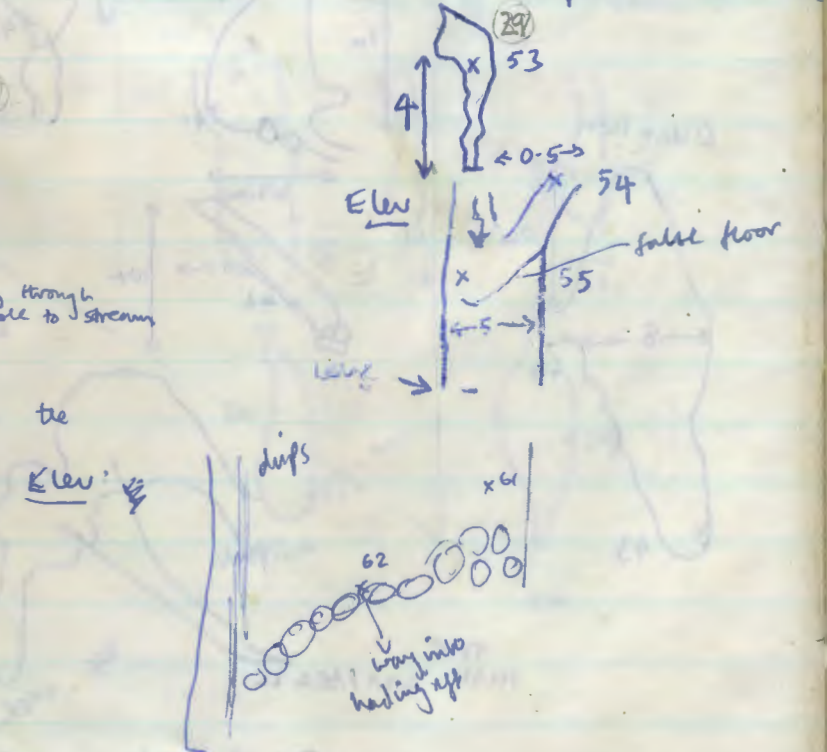
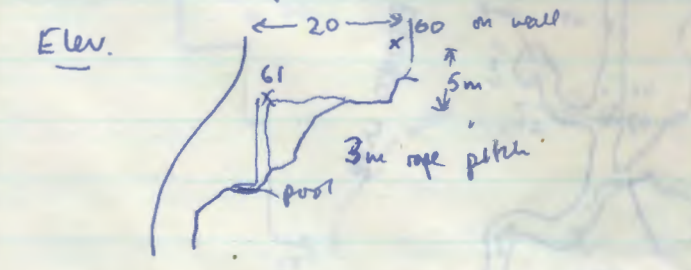
F20 survey (cont)

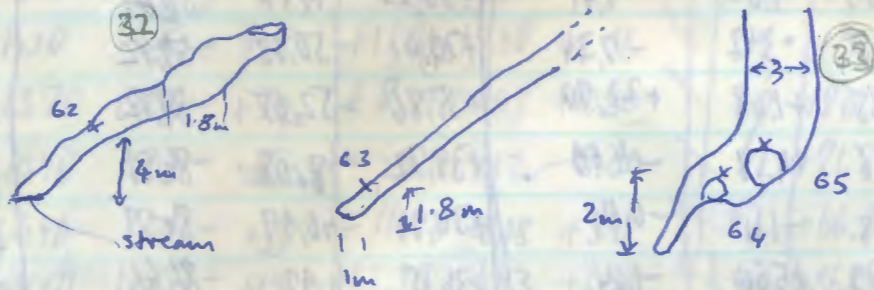
(53)

S→S	Tape	Bearing	Inclination	Av
55→56	8.40	142	-54	7
48→47	10.27	224	+10	2m (28)
48→49	3.87	004	-48	2m
50→49	5.50	240	+2	1m
50→51	5.42	346	+16	2m
52→51	3.15	177	-2	1.5
52→53	4.23	228	-25	1.5
48→54	5.35	191	-42	1m
55→54	17.86	269	+53	
55→56	8.40	142	-54	3m
57→56	15.00	188	+69	3
57→58	17.85	161	-70	4
58→59	14.25	146	-74	4
60→59	14.10	58	+08	3
61→60	13.70	83	+52	15
61→62	10.4	230	-52	
63→62	16.4	053	+35	1m
63→64	4.71	164	+12	blocks
65→64	3.41	53	-47	3



There are 2 dripping inlets in the high Chaparral, near B, & near G2.





Evaluation of the above

leg	R	g	α	Δx	Δy	Δz	Station	GN as from last year's limit of survey		
1-2	810	149	+27	+3.72	-6.19	+3.68	2	+3.72	-6.19	+3.68
3-2	7.45	294	-14	-6.60	+2.94	-1.80	3	+10.32	-2.13	+5.48
3-4	6.25	174	+51	+0.41	-3.91	+4.86	4	+10.73	-13.04	+10.34
5-4	9.10	349	-39	-1.35	+6.94	-5.73	5	+12.08	-19.98	+16.06
5-6	3.88	070	-28	+3.22	+1.17	-1.82	6	+15.30	-18.81	+14.24
7-6	5.35	223	+69	-1.31	-1.40	+4.99	7	+16.61	-17.41	+9.25
7-8	5.97	100	-47	+4.01	-0.71	-4.37	8	+20.62	-18.11	+4.88
8-9	6.30	0	-90	0	0	-6.30	9	+20.62	-18.11	-1.42
10-9	4.10	300	+59	-1.83	+1.06	+3.51	10	+22.45	-19.17	-4.93
(variation over the whole 360° causes $\pm 2.1m$ difference in horizontal leg)										
11-10	2.10	0	+4	0	+2.09	+0.15	11	+22.45	-21.26	-5.08
12-11	2.81	244	+16	-2.43	-1.18	+0.77	12	+24.87	-20.08	-5.85
13-12	2.24	290	+45	-1.49	+0.54	+1.58	13	+26.36	-20.62	-7.44
14-13	4.90	042	+44	+2.36	+2.62	+3.40	14	+29.00	-23.24	-10.84
14-15	1.59	137	-79	+1.51	-1.62	-11.38	15	+25.51	-24.86	-22.02
16-15	10.84	042	-41	+5.47	+6.08	-7.11	16	+20.04	-30.94	-15.11
16-17	5.53	114	+64	+2.21	-0.89	+4.97	17	+22.25	-31.92	-10.14
17-18	1.78	096	-16	+1.70	-0.18	-0.49	18	+23.95	-32.10	-10.63
19-18	24.25	0	+90	0	0	+24.25	19	+23.95	-32.10	-34.88
20-19	13.14	253	+43	-9.19	-2.81	+8.96	20	+33.14	-29.29	-43.84
20-21	9.84	184	+13	-0.67	-9.56	+2.21	21	+32.48	-38.86	-41.63
22-21	5.70	027	-13	+2.52	+4.95	-1.28	22	+29.95	-43.81	-40.34
22-23	6.95	217	-71	-1.36	-1.81	-6.57	23	+28.59	-45.61	-46.91
24-23	1.38	289	+33	-1.01	+0.56	+0.75	24	+29.60	-46.17	-47.67

433

Evaluation of above P20 Survey (cont'd) 8/8/86 G.N.

leg	R	g	d	E			N			Station
				Δx	Δy	Δz	x	y	z	
24-25	2.84	157	-58	+0.59	-1.39	-2.41	+30.19	-47.56	-50.07	25
25-26	8.10	183	-65	-0.18	-3.42	-7.34	+30.01	-50.98	-57.42	26
27-26	2.350 2.86	155 286	55 +75	-5.85	+1.68	+22.70	+35.86	-52.65	-80.12	27
27-28	2.15 2.10	122 122	41 41	+2.86	+4.58	-4.69	+38.72	-48.08	-84.81	28
29-28	2.10 5.32	122 351	10 18	+1.78	-1.11	-0.04	+36.94	-46.97	-84.77	29
29-30	5.32 0	351 0	18 -90	-0.79	+5.00	-1.64	+36.15	-41.97	-86.41	30
31-30	15.45	0	-90	0	0	-15.45	+36.15	-41.97	-70.26 (rept. 29)	31
32-31	2.33	146	-3	+1.30	-1.93	-0.12	+34.85	-40.04	-70.84	32
32-33	2.35	043	+4	+1.60	+1.71	+0.16	+36.45	-38.33	-70.68	33
34-33	3.09	159	+19	+1.05	-2.93	+1.01	+35.40	-35.60	-71.68	34
34-35	3.44	042	-18	+2.19	+2.43	-1.06	+37.59	-33.17	-72.95	35
36-35	5.05	128	+4	+3.97	-3.10	+0.35	+33.62	-30.06	-73.10	36
36-37	3.33	320	+4	-2.14	+2.54	+0.23	+31.48	-27.52	-72.87	37
38-37	2.89	198	+30	-0.77	-2.38	+1.45	+32.26	-25.14	-74.31	38
38-39	10.38 10.38	297	-11	-9.08	+4.63	-1.98	+23.18	-20.51	-76.29	39
39-40	0.68	345	+8	-0.17	+0.65	+0.09	+23.00	-19.86	-76.20	40
40-41	13.80	017	-52	+2.48	+8.12	-10.87	+25.49	-11.74	-87.07	41
42-41	3.90	266	-31	-3.33	-0.23	-2.01	+28.82	-11.51	-85.06	42
42-43	10.45	066	-2	+9.54	+4.25	-0.36	+38.36	-7.26	-85.43	43
44-43	25.48	176	-62	+0.83	-4.93	-2.50	+39.53	+4.68	-62.93	44
44-45	6.42	049	+7	+12.30	+10.69	+2.00	+49.83	+15.37	-60.93	45
46-45	11.33	254	+9	-10.76	-3.08	+1.77	+60.59	+18.45	-62.70	46
46-47	9.27	045	+12	+6.41	+6.41	+1.93	67.00 +67.00	+24.86	-60.77	47
48-47	10.27	224	+10	-7.03	-7.28	+1.78	+74.02	+32.14	-62.56	48
48-49	3.87	004	-48	+0.18	+2.58	-2.88	+74.20	+34.72	-65.43	49
50-49	5.50	240	+2	-4.76	-2.75	+0.19	+78.96	+32.47	-65.63	50
50-51 50-51	5.42	346	+16	-1.26	+5.06	+1.49	+77.70	+42.53	-64.13	51
52-51	3.15	177	-2	+0.16	-3.14	-0.11	+77.54	+45.67	-64.02	52
52-53	4.23	228	-25	-2.85	-2.57	-1.79	+74.69	+43.10	-65.81	53
54-53	5.35	191	-42	-0.76	-3.40	-3.58	+73.26	+28.24	-66.14	54
55-54	17.86	269	+53	-10.75	-0.19	+14.26	+84.01	+28.42	-80.40	55
55-56	8.40	142	54	+3.04	-3.89	-6.80	+87.05	+24.53	-87.20	56

down

Crossing
up

by	R	9	4	0x	0y	0z	Station	X	Y	Z
57-58	15.20	188	+69	-0.75	-5.32	+14.00	57	+87.80	+29.86	-101.20
58-59	17.85	160	+70	+1.99	-5.77	-16.77	58	+89.79	+24.08	-112.97
59-60	14.25	146	-74	+2.20	-3.26	-13.70	59	+91.98	+20.83	-131.69
60-61	13.70	083	+52	+8.37	+1.03	+10.80	60	+80.14	+13.43	-132.63
61-62	10.40	230	-52	-4.90	-4.12	-8.20	61	+71.77	+12.40	-144.43
62-63	16.40	053	+35	+10.73	+8.08	+9.41	62	+66.86	+8.28	-152.63
63-64	4.71	164	+12	+1.27	-4.43	+0.98	63	+56.14	+0.20	-162.03
64-65	3.91	053	-47	+1.86	+1.40	-2.49	64	+57.41	-4.23	-161.05
65-66							65	+55.55	-5.63	-158.56

-3.22
-1.62
-5.44

- depth at (63) thus seems to be -54cm, assuming last years limit, surr. was at -382m.
- the thing is not heading for FV56; (well not very much anyway)



present limit
(too deep for L. Victoria if surface figures are correct)

last survey pt. in 1985 F28
(F17) is at
263-86 / 93-08 / -381-84

535

F20 The final Conflict.

8/8/86

Book - Phil Duncan

Instruments - Martin May,

TAPS - Phil Rose,

Compass. 514447

Cline 510270

(N) on computer...

THE NUMBERS.

N ^o	COMPAS	CLINO	TAPS	PASSAGE WIDTH	PASSAGE HEIGHT	STATION HEIGHT	(at station)
0 → 1	172	-12 8	4/37	2	0/5	1/5	1
2 → 1	015	+42	1/32	—	—	—	2
3 → 2	055	+55	10/15				3
4 → 3	025	+65	11/42				4
5 → 4	269	+61	14/35				5
5 → 6	228	-14	9/42	1/5	4	3	6
7 → 6	355	+22	3/66	1/5	2	1/5	7
7 → 8	250	-2	8/70	2/5	2	1/5	8
9 → 8	090	+4	6/54	1	4/5	4	9
9 → 10	219	-34	4/32	1/6	6	3	10
11 → 10	075	+10	7/2	2	6	1/5	11
11 → 12	244	+2	8/96	0/5	5	—	12
13 → 12	076	-21	17/1	1/4	—	—	13
13 → 14	250	-1	27/6	2	INLET	—	14
15 → 14	045	+22	16/6	1/5	4	1	15
15 → 16	253	0	17	0/8	—	—	16
17 → 16	041	-1	7/54	1/5	5	1/5	17
17 → 18	254	-1	22/58	1	6	1/5	18
18 → 19	250	+60	4/38	1	1	0/5	19
20 → 19	073	-6	6/6	1	1	0/5	20
20 → 21	239	-10	26/5	2	4	1/5	21
22 → 21	063	+4	10/35	1	2	0/5	22
22 → 23	254	+7	13/5				23
24 → 23	064	+6	15/75				(23)

RIFT

THE REST OF THE NUMBERS

c/o Gerhard and his hp 15C =

836

leg	East North Up			Station	as from last year's print cont'd from previous page		
	Δx	Δy	Δz		X	Y	Z
1>1	+0.59	-4.23	-0.91	1	+56.14	-9.86	-159.47
2>1	+0.25	+0.95	+0.88	2	+55.89	-10.81	-160.35
3>2	+4.77	+3.34	+8.31	3	+51.12	-14.15	-168.67
4>3	+2.04	+4.37	+10.35	4	+49.08	-18.52	-179.02
5>4	-6.96	-0.12	+12.55	5	+56.04	-18.40	-191.57
5>6	-6.79	-6.12	-2.28	6	+49.24	-24.52	-193.85
7>6	-0.30	+3.38	+1.37	7	+49.54	-27.90	-195.22
7>8	-8.17	-2.97	-0.30	8	+41.37	-30.87	-195.52
9>8	+6.52	0	+0.46	9	+34.85	-30.87	-195.98
9>10	-2.25	-2.78	-2.42	10	+32.59	-33.65	-198.39
11>10	+6.85	+1.84	+1.25	11	+25.74	-35.49	-199.64
11>12	+8.05	-3.93	+0.34	12	+17.69	-39.41	-199.33
13>12	+15.49	+3.86	-6.13	13	+2.20	-43.28	-193.20
13>14	-25.93	-9.44	-0.48	14	-23.73	-52.72	-193.68
15>14	+10.88	+10.88	+6.22	15	-34.61	-63.60	-199.90
15>16	-16.26	-4.97	0	16	-50.87	-68.57	-199.90
17>16	+4.95	+5.69	-0.13	17	-55.81	-74.26	-199.77
17>18	-21.67	-6.21	-0.39	18	-77.49	-80.47	-200.16
18>19	-2.06	-0.75	+3.79	19	-79.54	-81.22	-196.37
20>19	+6.28	+1.92	-0.69	20	-85.82	-83.14	-195.68
20>21	-22.37	-13.44	-4.60	21	-108.19	-96.58	-200.28
22>21	+9.20	+4.69	+0.72	22	-117.39	-101.27	-201.00
22>23	-12.88	+3.69	+1.65	23	-130.27	-104.96	-199.36

is this a backward leg?
or silly mid-off!

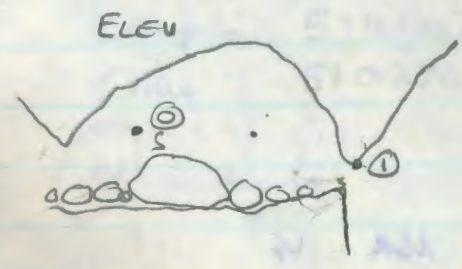
AB this must be a forward leg - have checked this (carefully) with Phil & Phil

total depth ~ 584m

COMPUTED TOTAL DEPTH (SAR) = -581.2

F20 DRAWINGS FROM LIMIT OF PREVIOUS SURVEY TO SUMP

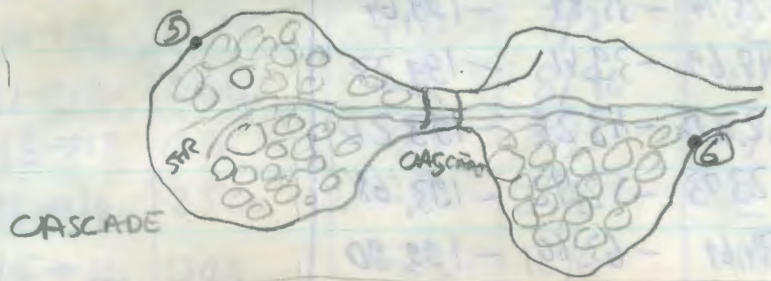
PLAN



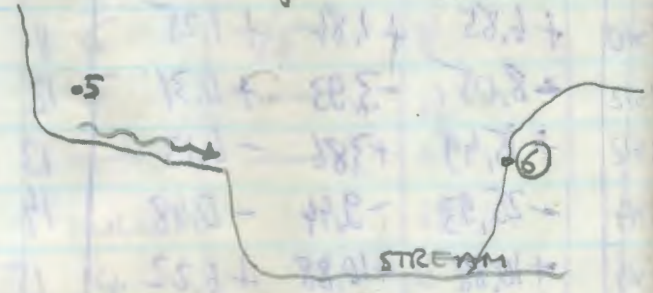
PLAN



PLAN (SPLIT AT 5)



ELEV HIGH CHAMBER

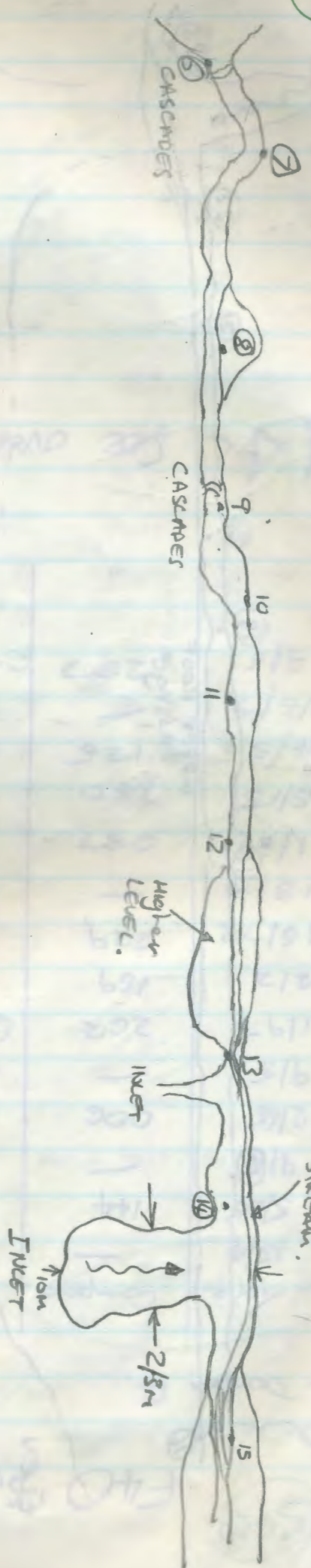


1/18/20

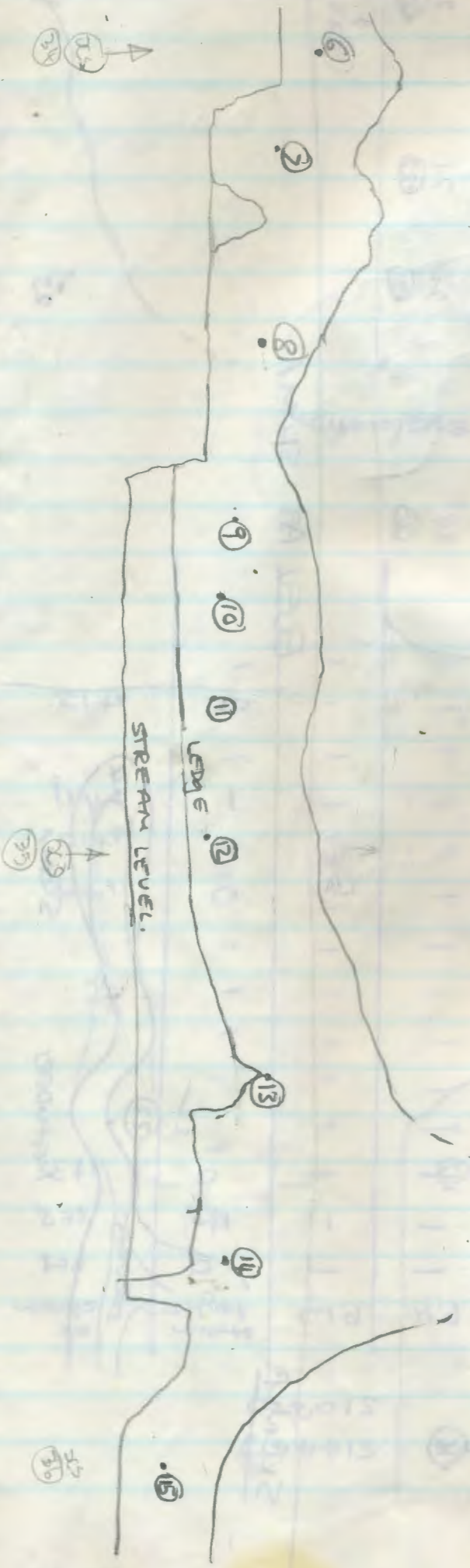
5,182 - (122) 11420 TOTAL 12040

PURETANIC CANYON.

PLAN



ELEVATION

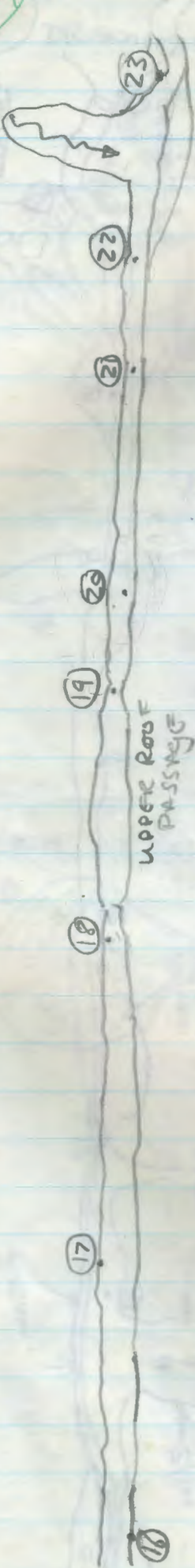


F20 PHREATIC CANYON CONT'D

PLAN

(539)

INLET



UPPER ROOF PASSAGE

ELEV

16

17

18

19

18

19

20

21

22

23

20

21

22

23

24

25

26

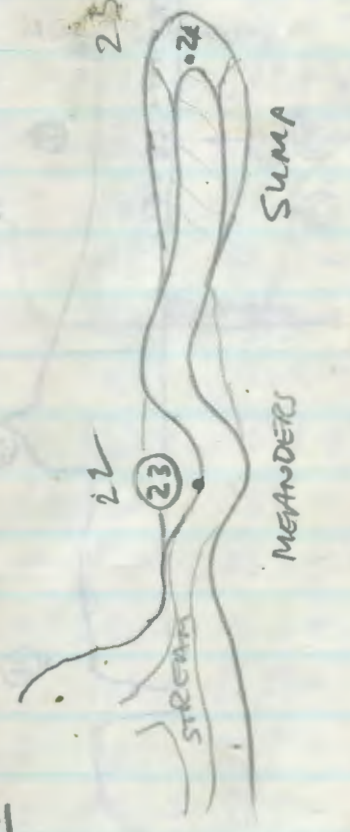
27

28

29

ELEV AT SUMP

Sump



22

23

24

MEANDERS

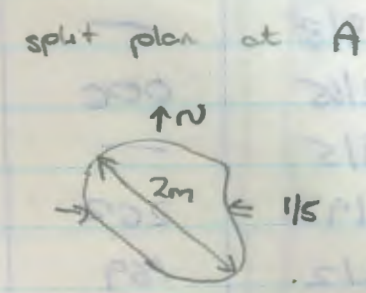
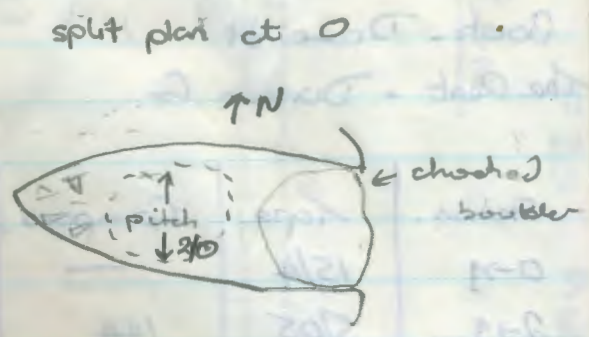
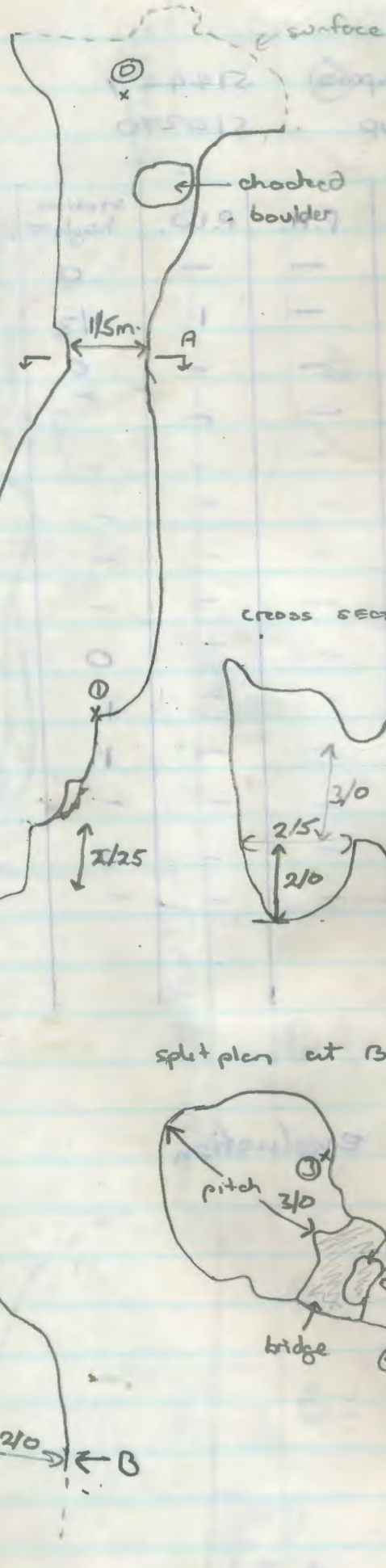
SUMP

23

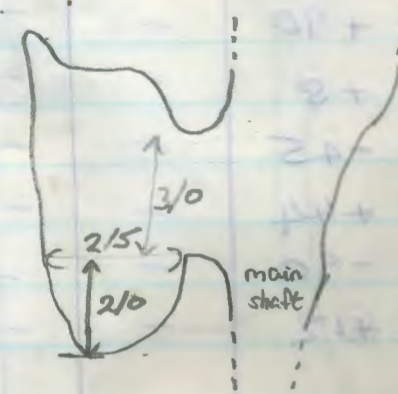
29

1/67m

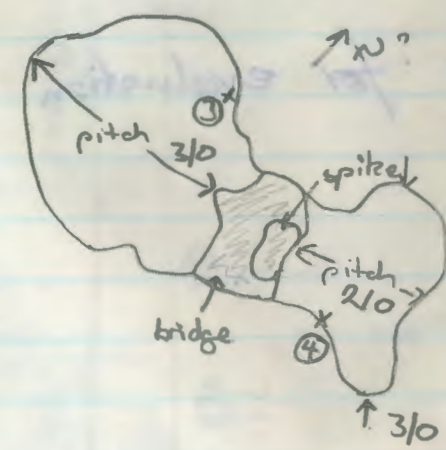
W ← → E



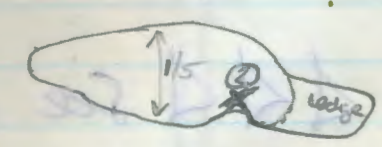
cross section at x-x



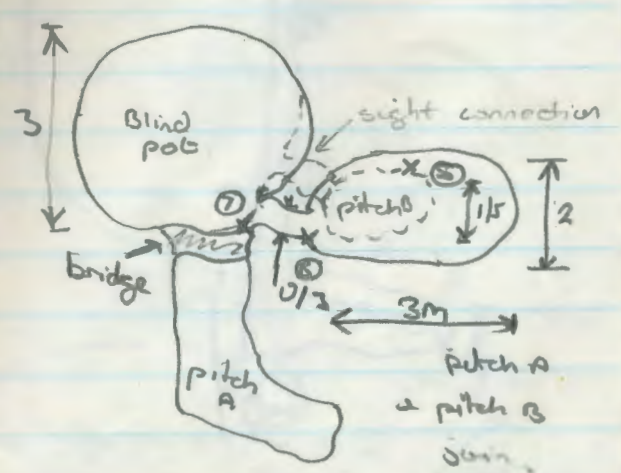
split plan at B-B



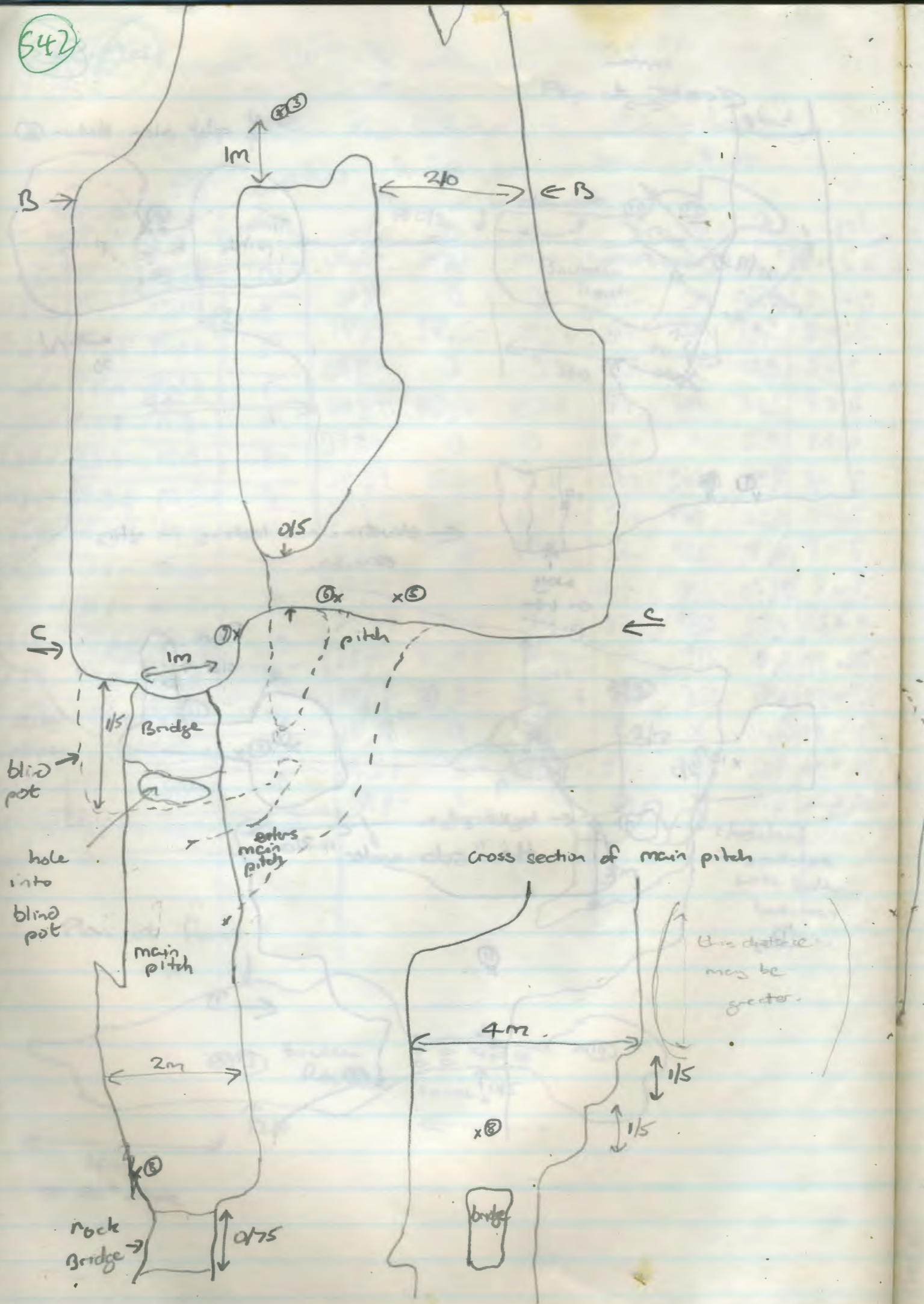
split plan at station 2



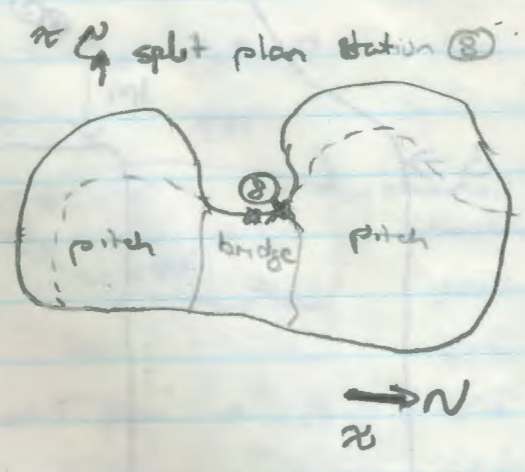
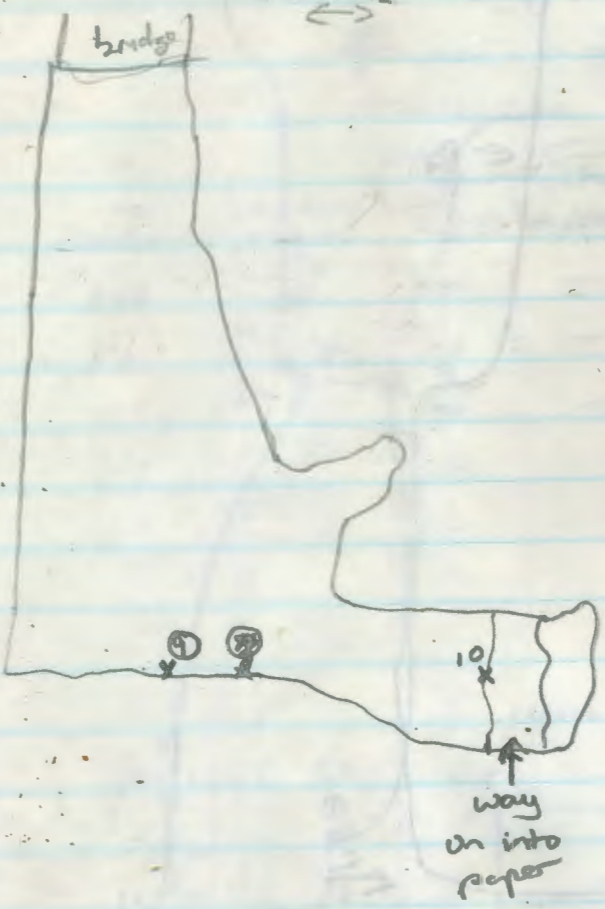
split plan at case



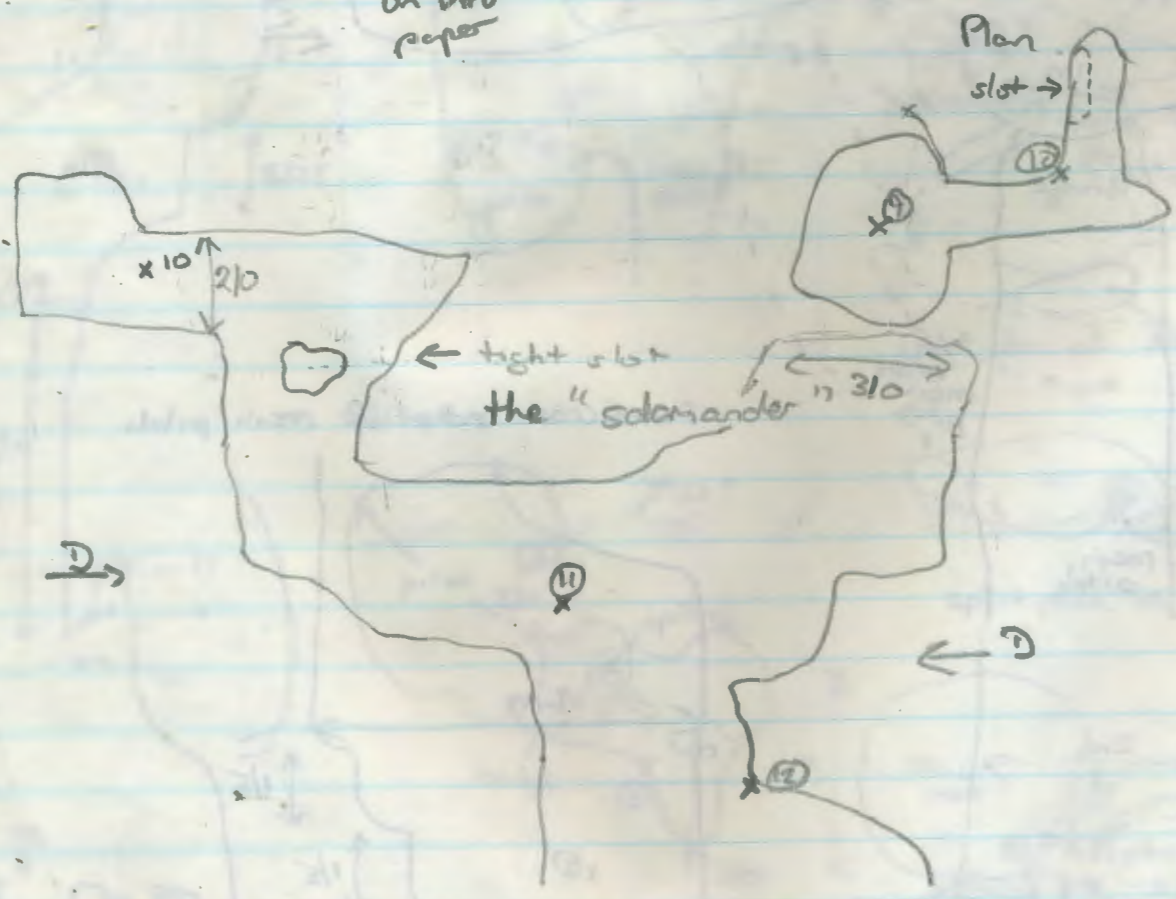
542



upward
W ← E



← elevations now looking in this direction



17/8/88 evaluation of F40 survey (S.45) (90)

'head of doline' is marked with little red splash on the western side of the entrance rift

(conventions as usual)

leg	R	φ	α	Δx	Δy	Δz	station	Coordinates wrt. head of doline		
								x	y	z
o.d. → 0				+2.07	+0.74	-2.00	0	+2.07	+0.74	-2.00
0 → 1	15.40	X	-90	0	0	-15.40	1	+2.07	+0.74	-17.40
1 → 2	5.05	144	+48	+2.99	-2.73	+3.75	2	+0.08	+3.47	-24.15
2 → 3	9.80	X	-90	0	0	-9.80	3	+0.08	+3.47	-30.95
3 → 4	2.65	006	+32	+0.23	+2.24	+2.40	4	-0.15	+2.24	-32.36
4 → 5	9.50	X	-90	0	0	-9.50	5	-0.15	+2.24	-41.86
5 → 6	2.93	262	+12	-1.87	-0.26	+0.40	6	-2.02	+0.98	-41.46
6 → 7	2.20	169	+52	+0.26	-1.33	+1.73	7	-2.28	+2.31	-43.19
7 → 8	16.72	229	-52	-7.77	-6.75	-13.48	8	-10.05	-4.45	-56.37
8 → 9	18.70	X	+90	0	0	+18.70	9	-10.05	-4.45	-75.07
9 → 10	1.82	087	+88	+1.80	+0.09	+0.25	10	-8.25	-4.35	-71.81
10 → 11	6.95	350	-45	-0.76	+4.28	-4.35	11	-9.00	-0.07	-79.16
11 → 12	4.55	125	+44	+2.68	-1.88	+3.16	12	-11.68	+1.81	-82.32
12 → 13	16.70	X	-90	0	0	-16.70	13	-11.68	+1.81	-99.02
13 → 14	9.60	287	+12	-8.98	+2.75	+2.00	14	-20.66	+4.55	-97.03
depth below 14	4.70	X	-90	0	0	-4.70	bottom	-20.66	+4.55	-101.73

Trimethoprim / 10 sulphur in it

31

OXFORD UNIVERSITY EXPEDITIONS

IMPORTANT INSTRUCTIONS

DIARRHOEA. Much of the diarrhoea encountered in foreign parts is due to change of diet. Some is due to infection. Prevention is important and half the battle is won by taking simple precautions. Travellers often show a remarkable lack of common sense. Spanish pears may be luscious, but if a Spaniard eats 8 large Spanish pears he will get diarrhoea, so eat fruit in moderation. If you do eat fresh vegetables or fruit make sure that these are washed in water purified with Sterotabs (or Puritabs). Salads that include green lettuce are particularly hazardous. Vegetables are often manured with human dung, and those with a large surface (such as lettuce) are particularly dangerous. You have a little free acid in your stomach, it will cope with a few nasty germs, but not with a lot. Cucumber and tomato salads are relatively safe. If you get diarrhoea, take codeine phosphate, two 30 mg tablets every 4 hours until the diarrhoea has stopped, or take Lomotil, 4 tablets at once, and then 2 tablets four hourly until the diarrhoea has stopped. You may have been given Imodium (loperamide): take two capsules at once, and then one every time you have a motion until you seize up. If none of these stop the diarrhoea and you are feeling ill, and particularly if you are passing stools with blood and mucus, take Septrin or Bactrim (cotrimoxazole) two tablets twice a day for five days. You may have been given trimethoprim instead of cotrimoxazole. You should take 200 mg twice a day. You may have been given Amoxil (amoxycillin) 250 mg capsules. Take two, four times a day for five days. If this does not clear the diarrhoea you must seek medical help. Septrin or Bactrim should not be taken by people that are hypersensitive to sulphonamide. Amoxil should not be taken by people who are hypersensitive to penicillin. (Trimethoprim)

OTHER INFECTIONS. Do not use antimicrobials recklessly. If you have boils and a raised temperature, or infected wounds, or you think you have pneumonia or bronchitis it is reasonable to take a drug. For boils and infected wounds use first clindamycin. The capsules are 150 mg. Take one capsule four times a day. If you are no better at the end of 72 hours, take Septrin (or Bactrim) two tablets (or capsules) twice a day for five days. (Remember that the latter must not be given to people who are hypersensitive to sulpha drugs). Do not give both drugs at once. If you are in doubt you must seek medical advice.

Some of you may be given flucloxacillin (Floxapen). This is also useful for infected wounds and boils. Take one capsule (250 mg) four times a day. If the infection is not better after three days go on to Septrin or Bactrim as above.

HEAT EXHAUSTION AND SUNSTROKE. Keep your water and salt requirements in balance (see other sheet).

ANTI-HISTAMINES. These drugs suppress allergic reactions of various sorts and are useful in suppressing nettle-rash, itchy skin conditions, hay fever, and to some extent mild asthmatic wheeze. Remember that they all, but to a varying extent, tend to make you sleepy. Do not drive if you are at all drowsy. You may have two drugs, Pro-Actadil and Phenergan. Each tablet of the former is of 10 mg, the latter 10 mg or 25 mg. Some may be given Piriton.

PRO-ACTADIL is suitable for use in the day time. One once a day may be adequate but one may be taken at night and morning if necessary.

PHENERGAN the most powerful antihistamine, is likely to make you sleepy, so take preferably at night. Do not take if you are driving. The 25 mg tablet is very potent.

PIRITON 4 mg tablets. A useful drug for moderate allergy. Take one every four to six hours.

ECZEMA. With irritating skin conditions, use Betnovate cream locally or Vioform and hydrocortisone cream. Both contain steroid and an antiseptic.

DISINFECTANTS. For cuts and scratches use tincture of iodine unless you are hypersensitive to iodine. Bigger cuts may be washed out with Savlon. A sachet of Savlon concentrate will make a pint of disinfectant ready for use.

MOTION SICKNESS. Marzine tablets, 1 every two to four hours, or Dramamine tablets, 1 every two to four hours, help most people.

SORE THROATS. Most are not due to bacteria and a soothing gargle with some soluble Aspirin (Disprin) usually takes the worst agony away. If the throat is dark red and very sore it is possible you may have a bacterial infection and if you have a fever, take clindamycin (150 mg capsule) or erythromycin 1 ~~four~~ ^{three} times a day for five days.

SLEEPING TABLETS. You have been given Mogadon (nitrazepan) 5 mg or Rohypnol (flunitrazepam) 1 mg. One will send the average adult off to sleep. If one does not work you can safely take two or even three.

N.B. Keep these tablets safely and ensure that they do not fall into the hands of children or irresponsible people.

HEADACHES AND OTHER PAINS AND ACHES. You have been given paracetamol tablets. Take one or two tablets every four hours.

As an alternative use soluble aspirin, 2 tablets, which may be taken every four hours. Cut the dose if you get ringing in the ears.

For severe pain: take Feldene (piroxicam) one a day.

INDIGESTION. Use Gaviscon tablets, chew or suck one or two as often as necessary.

SUNBURN. Avoid going into blazing sunshine or working by the sea unless you have used Uvistat ointment on the exposed part of your body, and pomade (lipscreen) on your lips.

MOSQUITOES AND FLIES. If you are in an area where there are tsetse flies, black flies (*simulium damnosum*), or a lot of anopheles or aedes, you must use a mosquito net. Both in the Tropics and Arctic and Antarctic mosquitoes can be a nuisance. They will descend in their millions from nowhere and you should have a good mosquito repellent. The best is a mixture of 2-ethyl-1-3-hexandiol (94 G/l), 56.4 ml and N, N-diethyl-m-tolamide (99.7 G/l) 6.3 ml and industrial methylated spirit 66 O.P. to 1 litres. It can be bought in America and Sweden. The Swedish variety is known as Djungel Olja 3 x 6. Do not put it in the eyes or in the mouth.

In some parts of the Arctic tiny flies can be a great nuisance, crawling into the ears, eyes, mouth and nose. Insect repellent does not work on them, but the local population usually will be able to advise you. In Greenland you should go to the Royal Greenland Trading Company (KGH) and buy a very fine mesh shopping bag, put it over your head and wear mittens. This works. Do not put a polythene bag over your head: you stand a reasonable chance of asphyxiating very rapidly.

- 14 TYPHUS. If you are going to areas where you are likely to encounter rickettsial disease (epidemic typhus, tick typhus, scrub typhus, Rocky Mountain spotted fever) you may be given a supply of tetracycline. If you get a fever (particularly following a tick bite) take two, 4 times a day for a week, and then one, 4 times a day for a further week.
- 15 INFECTED OR RED EYES are usually due to a conjunctivitis caused by a bacterium. Optrex is not very useful. Use Polyfax or tetracycline eye ointment 3 or 4 times a day. Put a little snake of cream on the turned down lower eyelid. Put the upper eyelid over it and massage gently. This should clear the infection in the course of a couple of days.
- 16 ATHLETES FOOT. This can be particularly tiresome if you have sweaty feet. Wash your feet thoroughly and dust the feet and socks with Mycil or Daktarin or some similar antifungal dusting powder.
- 17 FLEAS AND LICE. Dust your clothes and sleeping bag with flea powder (kills pests on pets and undergraduates!). Go to the nearest pet shop and ask for dog flea powder. Hunt for fleas and lice on you. If badly bitten use Betnovate or Synalar cream or Eurax cream.
- 18 TAPEWORMS AND ROUNDWORMS. For tapeworm take Yomesan (niclomaside 500 mg) four tablets, chew well and wash down with water. A cascara tablet should be taken as a purgative. For roundworm take Vermox (mebendazole 100 mg) one night and morning for three days.
- 19 AMOEBIASIS. If you think you have got amoebiasis (bloody diarrhoea) take tinidazole 2 gms (four tablets) every morning for three days and then Furamide, one tablet (of 500 mgs) three times a day for five days, or Flagyl (metronidazole) 800 mg three times a day for four days instead of tinidazole. AVOID MILK AND MILK PRODUCTS FOR SIX WEEKS. No alcohol whilst you are taking tinidazole or metronidazole.
- 20 HIGH ALTITUDE. Note that above 8-10,000 feet the contents of full tubes of ointment will shoot out under pressure. Unscrew cap with care. You may be given Diamox 500 mg twice a day to counteract mountain sickness.

GENERAL NOTE.

It is important that drugs not used are handed in to me for use of future expeditions, or burnt. They could be dangerous particularly for children and in foreign parts any expedition refuse is often avidly collected by the locals. If you have a deserving local medical centre, by all means give remaining drugs to them. We want the drug cases back.

Bent Juel-Jensen.
University of Oxford.
Trinity 1986.

removes * stuff to make you shut!!

B4

Medical Kit

	Top Camp	Base	Camp	Spare Box (base)
Uvistat	10	2	3	—
Uvistat	4	—	1	—
Uvistat lip	8	—	6	13
Dioralyte	6	—	5	—
lansotil	100	—	200	—
Magador	—	—	—	all
Betnovate	—	—	—	all
Pheregen	—	—	—	all
Pro-actid	—	—	—	all
Floxaper	—	—	—	all
Septin	—	—	—	all
Gaviscon	3	—	2	—
Amoxil	1	—	—	—
Bactrim	—	—	—	all
Muzil	—	—	—	—
Solpin	7	—	5	rest
Dress pack	2	—	1	6
Bactigras	4	—	3	—
Seroket	1	—	—	—
Trimethoprim	—	—	—	2
Dakin	—	—	—	4
Immodium	1	—	—	—
Daktrin	—	—	—	—
Achromycin	1	—	—	—
Picky Heat	1	—	—	—
Sawlon	10	—	10	rest
Insect Spray	—	—	—	2
Insect repel gel	1	—	—	—
Swabs	—	—	—	2
Printon	20	—	—	—
Erythromycin	30	—	—	30
Feldene	20 (dmg worth)	—	—	—
Sore Phosphate	1 bottle	—	—	—

23

Remember to use for your help in the end of a major accident such as a plane crash

Cook the tapes, they are not a substitute for qualified aid. They are designed to help you bring a victim alive to the surface.

DO THE FOLLOWING IN SEQUENCE.

1. DON'T PANIC. Be methodical. Don't be rushed into hasty action. Keep your reason.

2. MAKE PREPARATIONS TO TAKE THE VICTIM OUT. Unless the injury is obviously trivial, all accident victims should be brought to the surface as soon as possible. Beware those who have been hit on the head but look "all right now". They could be bleeding inside the skull and be unconscious and dying in a couple of hours. GET THEM OUT.

3. UNCONSCIOUSNESS. Is the victim able to talk? If so, ask them if they can feel and move their limbs. IF NOT, ASSURE AN AIRWAY.

4. AIRWAY. PULL THE JAW FORWARD, AND KEEP IT THERE. This stops the tongue falling back and the windpipe. The ideal position is "sniffing the spring air" - head forwards and chin up. An unconscious patient will die rapidly without an airway. If they pulse or look as if they might, roll them on their side and let the vomit come out - BUT SEE "BACK".

5. BLEEDING. If they are obviously bleeding, PRESS ON IT with your hand or a pad, for five or ten minutes without peeping. If it doesn't stop, keep pressing.

6. PULSE. Compare the victim's pulse with your own. SHOCK - severe blood loss - the victim has a fast, thready, weak pulse; they are cold, clammy and sweaty. If you are in no doubt that the victim looks like this, they need an intravenous line (see below). IF YOU ARE IN ANY DOUBT, DON'T CARES ARE NUCKY PLACES AND YOU'LL CAUSE MORE TROUBLE THAN YOU'LL CURE. If you have a line, give all the fluid you've got. GET THEM OUT.

7. PAIN. DON'T MOVE THE VICTIM UNTIL YOU'VE FELT THEIR BACK, OR IF THEY ARE PARALYSED OR IN A SERIOUS POSITION ANYWHERE. Feel all the way down the spine. You will feel a row of regular bumps; if there is a gap or step, or the victim has pain at one spot on pressing, they have a back injury. If you're in doubt, treat as one.

8. LOG ROLL. With three people, move the victim as a unit without twisting or bending. Use a log. Don't forget the head; don't turn, drop or bend it. In this fashion, get the victim out of harm's way on to a firm, flat, horizontal surface. Don't move them again until you've got them on to a Neil Robertson stretcher.

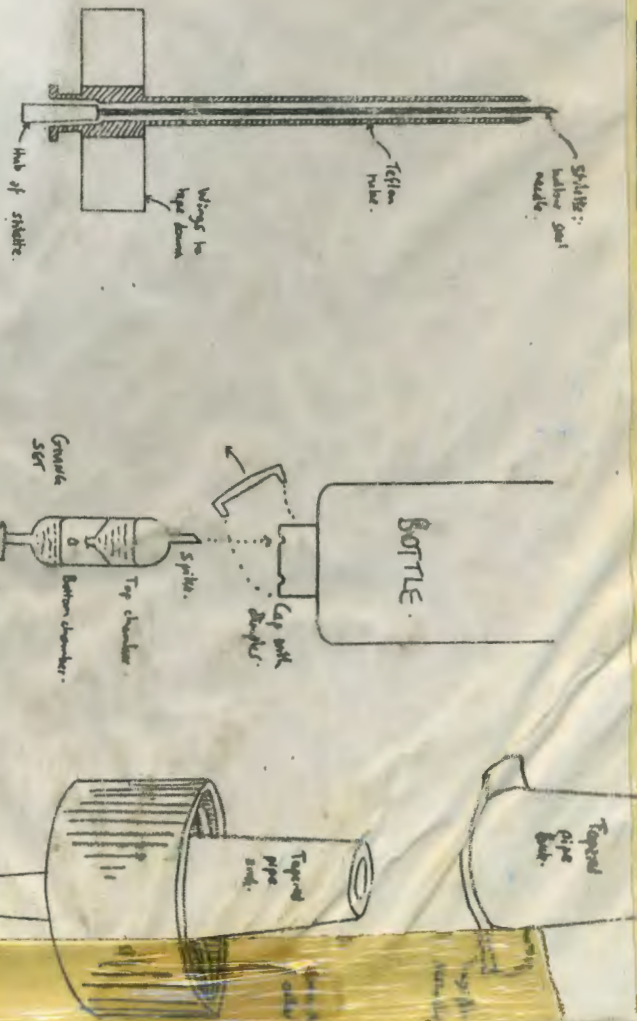
9. CHEST. If the victim has difficulty breathing, or pain on breathing, ENSURE AN AIRWAY and look at the chest (open the clothing; look at both sides). If there is a wound in the chest, PUT A PAD ON IT to stop air leaking in and letting the lungs down. Look at the movements; if one rib goes in while all the rest comes out, and vice versa, PUT A BIG PAD ON THAT RIB to hold it in - that is a "flail segment", a piece of chest wall which has come loose and is moving independently of the rest.

10. DEFORMITY. If either leg is bent out of shape, try and straighten it by pulling down on the foot. Support arms by putting them inside the clothing, or applying a sling if you can. Look for wounds on the limbs; these might connect with the fracture, so it is important to keep cap out of them. Put a pad on them, with pressure if they're bleeding. Slight broken limbs ideally put the victim on a stretcher.

11. HEAT. EXPOSURE IS A RISK especially for immobile victims. Change wet gear for dry if possible. If you are wearing dryer gear. Cover with a space blanket. Put into an Eskimo or other sleeping bag if you've got one. Give sugary food only if the victim is fully conscious - they might choke and block their AIRWAY. GET THEM OUT.

12. ON THE WAY OUT - Keep talking to them. Keep checking the pulse - if they weren't shocked before, they might become so.

Illustrations 1-6-66



1 Pull the protective cap off the bottom of the bottle; stick the spike at the top of the giving set through one of the dimples in the bottle.

2 Squeeze the bottom bulb of the giving set a few times to get fluid through, then open the cap and let it run down the tube. If you get air bubbles, hold the pipe vertically and flick it or tap it to get them to the end.

3 Get someone to squeeze the victim's arm to bring the vein up; cap or flick them if they're reluctant. The biggest cues are in the crook of the arm, but watch - the artery jumps underneath here. Check that what you're going for is a vein and not an artery; if you feel it pulsing when you touch it, it's an artery. Occasionally you find an artery near the surface.

4 Put the skin slightly on the stretch with one hand; with the other, push the Venipan or Medicut into the vein, facing up the vein. When blood comes back into the syringe hub, stop and push the tube up round the artery into the vein (holding the syringe still).

5 Release the arm from your friend's grip. Take the syringe out and connect up the fluid - the tube has a cap on it and which you take off, then push the connector on to the end of the Venipan and set it to lock it.

6 Tape the Venipan and the tube down to the arm.