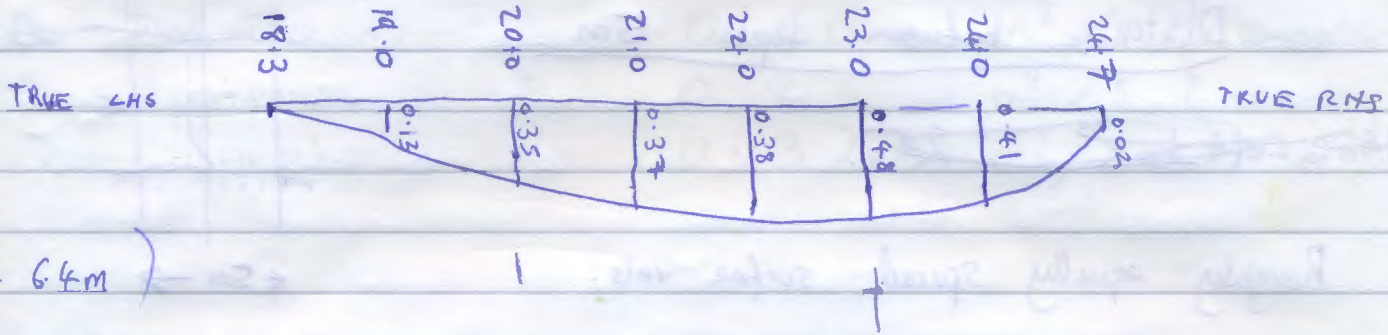


030897 (~ 17:00)

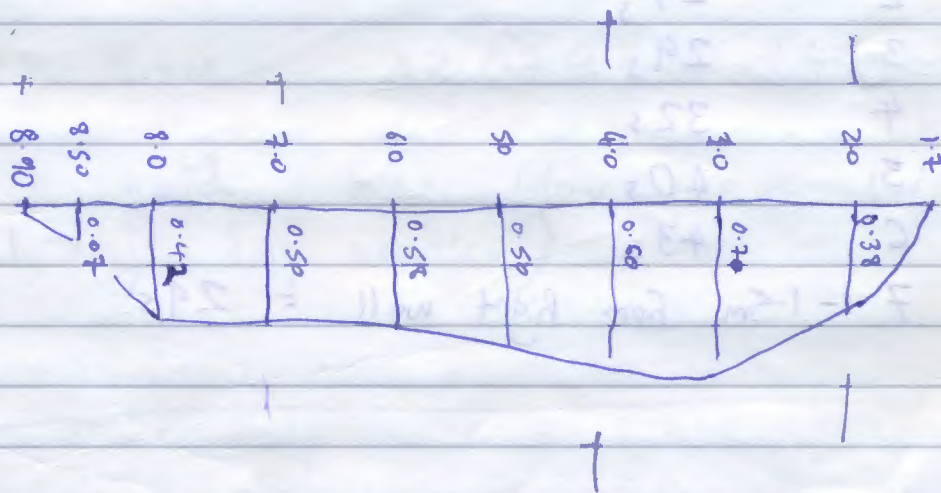
(Jan, Ali, Huw Pen)

Tape 1 (Same positions)



both looking downstream, 6.25m between tapes.

Tape 2



Surface velocities

| <u>Tape 1 chain</u> | <u>Time tape 2</u> |
|---------------------|--------------------|
| 19 m | 79 s |
| 20 | 28 s |
| 21 | 15 s |
| 22 | 16 s |
| 23 | 21 s |
| 24 | 30 s |
| 24.3 | 37 s |

Stage at (RHS
tree) abutment as
measured before
= -2.90 m.

33

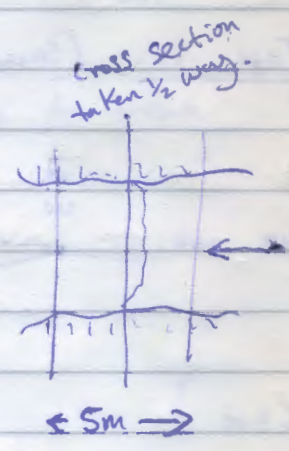
030897 (18:00)

Bio Cores Flow upstream of Culiambro (How, lan)

(1 measurement)

Distance between tapes 5m

~~5m from Left bank 29s.~~



Roughly equally spaced surface vels:

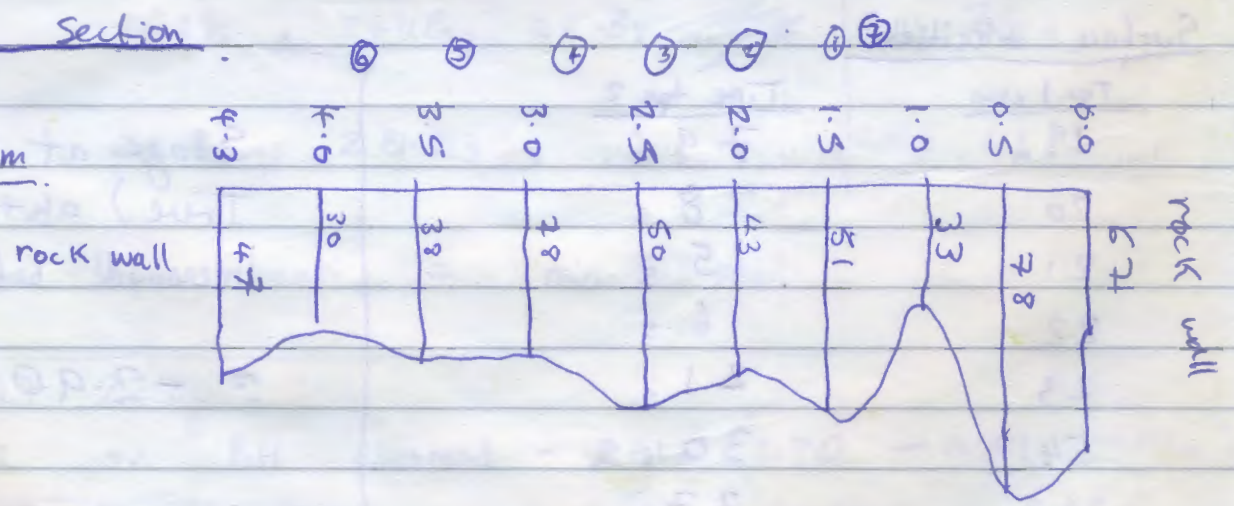
~~LHS~~ → RHS → LHS

| | | |
|-----|---|------|
| RHS | 1 | 22 s |
| | 2 | 27 s |
| | 3 | 29 s |
| | 4 | 32 s |
| | 5 | 40 s |
| LHS | 6 | 43 s |

7 1-1.5m from Right wall = 29s.

Cross Section

B = 4.3m



From these (03 08 97) observations :

| | | | | | |
|-----|------------|---|------|-------------------|--------------------|
| Q | Downstream | = | 0.60 | m ³ /s | } 10-20% accuracy. |
| Q | Upstream | = | 0.28 | m ³ /s | |
| ∴ Q | Culiambro | = | 0.32 | m ³ /s | |

* Not much difference in river height or flow velocity from 30 07 97 (within 1cm or so at bridge)

* No rain since 22 07 97 (45mm storm)

Represents a good "base flow" measurement, I hope (after ~ 11 days dry weather)

Flow measurement downstream on 23 07 97 not as high as expected: 1.09 m³/s. Culiambro probably 0.60 m³/s based on above proportions.

23/34

6/8/77 Good stuff Jan.

After a safe journey down in the dark last night, drove + flew to Lagos this morning for her bus.

Phoned Dave, who had no messages for Rob. bad news about the Test Matches, but revealed that Kes will be here tomorrow, need to carry all our gear back down the mountain.

Lagos is nasty today; millions of bodies about, & I spent an hour stuck in the new campsite scrape where I was sent by an unfriendly policeman who wouldn't let me come this way.

Not a coherent reading. NFM

ps scorchio in Lagos.

pps whose are the really nasty knickers?

ppps No sign of Gerhard / Iken.

8/8/97

I ARRIVE AFTER 40 HOURS TRAVELING FROM LONDON EXPECTING TO BE ABLE TO HOLD A LENGTHY ENGLISH CONVERSATION. BUT NO ONE WAS HOME.

11/8/97

I just thought I'd write something random because there's a lot of scenery stuff on the previous pages. Still the weather is nice! I think I'll have a wash now. splash!

I've now washed, (I'm a bit bored), no one else has arrived yet and I'm hungry. I've just watched some scouts pitching their tents on the edge of the shitty quarry and I'm staring. I've taken a careful review of the available food and I've decided that I don't want a raven meal so I'll shortly be heading off

to the bar for a nice steak sandwich and some potatoes
fries. It's almost 9 o'clock, the bar is calling.

Some messages from J.C. who is gone

1. Excellent live look by me. Thanks to everyone for making it's so.
2. To Alison. 3200 pls in envelope in kitty for you. No questions asked.
3. To van packers. I have (selfishly?) left one roc-sec (Big green Kerrimor Jag 575) of covering gear and one plastic bag (Biohazard!) of smelly personal gear in the trailer. Please do not throw these in the quarry. Please leave at C.D.'s house rather than the hub as I live there. (C.D.'s trailer is not the hub!).
4. There is no 4th message.

J.C.

Ps Bye.

12/8/97 Have successfully deposited J.C. on his bus at Arriandas but the journey was not entirely uneventful.

It all began when we had to queue long whilst shopping in Cangas. Consequently we were running a bit late when we arrived at Arriandas. We then failed to spot the bus station and took a wrong turn. At this point J.C. decided it would be quicker on foot and so left me with the van. I agreed not to leave until we knew he had caught his bus and decided to drive to the bus stop and meet him there again. Once back on the main road I stupidly assumed that because we hadn't seen the bus stop on the way in it must be the other way. 10 seconds later I was on a big road outside of Arriandas heading ~~xxxx~~ know when with ~~xxxxxx~~ chance of turning round. I almost took a side road but decided against it when

(36)

I saw the tight hairpin that would have to be negotiated - I've never liked squeezes with beads in them, they don't agree with me. Eventually I found someone more suitable to turn round (it was a total fluke - I tried having left, failed to find the road and ended up in a big sort of car parking thing with lots of space. Once back in Arriadas, which I almost missed owing to the sign post being after the junction, I drove straight to the bus stop to find JC still waiting, his bus was late.

Having said goodbye and buying a litre of keros for the journey (I'd already seen the waiting traffic jam) I familiarized myself with the tape player and set off towards Cangas. An hour later I arrived to discover the cause of the delay. However, I wasn't quite sure if they really were human traffic lights or just chimps escaped from the local zoo. One past them, however, things improved and I turned the Pogus tape over for the second time.

The journey continued in fine vein until I reached Lago Escal to be greeted by another human traffic light. He tried to direct me left so following El Jefe's example I called him over and in my first Spanish I explained the situation. "You can walk" he said. "Si," I agreed but I think he missed my point. Still following El Jefe's example I drove up to the roundabout along with everyone else. Unfortunately someone had double parked on the roundabout and the resulting body squeeze, had I attempted it, would probably have had Alonso raising his voice again. After a few minutes thought the queue behind me had grown sufficiently but it was time for decision action. I turned right. This lead, alas, instantly hit a cross rift that choked it both directions with no way on. A swift three point turn later and I was heading back to the attention parking area. Once again I followed the car in front up a cul-de-sac when all the spaces were taken. One by one I watched these $(2n+1)$ point turns ($n \in \mathbb{N} \wedge n \geq 2$). While I was quietly laughing another car left. A ^{small} Spanish car briefly considered the space before departing. Now it was my turn. A helpful Spanish pointed the space out to me & so I thanked him politely. It was a definite LeU-crack, tall

more of a Levi's-little-contortionist-brother-crack. I started to reverse. 100m later I was able to forward again to another car park. Then I saw what I was looking for - a nice big walking passage of a ~~car~~ parking space - straight ahead with a howling draft blowing into it; at least there would have been one if not for some ~~kkkkk~~ spaniard who was stood in the space blocking it up. I gesticulated. He looked at me blankly, not moving. I could see him thinking there was lots of space (lots = >2)... clearly the ~~kkkkkk~~ had never tried to park a minibus. I gave up. A short drive later I found 2 spaces side by side - statistically it had to happen somewhere but I dread to imagine the odds of actually witnessing it. I claimed them both, then decided that this was bit rude, shuffled slightly into a single space and then opened the door wide to discourage anyone from taking the other.

One French loaf and half a jar of mayonnaise later and all my kias was gone. I was bored of the Peugeot and I decided to try my luck again with the human traffic light. Miraculously he had gone. I had the sun on my back and an open road ahead. The brakes were no longer soft and squidgy and the petrol indicator had risen on the slope to slightly above empty. I went for it... and made it back to the campsite which, not surprisingly, was packed. The only space I could see was in the centre of the grass next to our camp. My way was still blocked by a sort of Motte and Bailey - a chain of ~~the~~ small lakes (or were they swamps?) surrounded by a wall of sea.

I spotted a breach in the wall and headed towards it following a 4-wheeled drive off road vehicle. It struggled, I aborted. A bit further along a second breach looked more enticing (well, I was getting desperate). My first feeble attempt fellered into a wheel spin. A short reverse was terminated by the same fate. People were starting to watch, anticipating a spectacle. A sneaky change to 2nd gear and a slight run up on the incline and I was through the lake on solid ground home and dry.

A Scotsman just asked me why the campsite down the hill wasn't open; 'they' wouldn't let him up here. I just laughed and said "Welcome to Spain!"

P.S. I still don't like driving but it can be fun! ^{lol.}

Kitty is hiding in the trailer.
 Le van rouge is thirsty for petrol.
 I am looking for the snow pole.
 (There are 'frites', onions, pepper and wine for supper.)
 Amordas is my Schrodinger (38°C at 12:30 today).

Kev, when asked by some Spanish at top camp where they were:
 "snow-pole" (carefully enunciated so they'd understand)

Nobby - "There's nothing incriminating about being photographed
 in a sleeping bag with 2 other people"

What people want on next year's expedition:

Alison - more flat mountains

Kev - frozen food packets (to daisy-chain rope)

15/8/97 Tap lamp abandoned 2 days prematurely
 due to damage caused by gumbilla raids by
 COWS ... (see below by Alison - ...)

for more news as it comes up - see this logbook
 - Tap lamp bag sealed in a biohazard bag ...

18/8/97 Laredo !! 3pm

Well on the way, we only await problems with the van / trailer / passports / weather / darkness to hold us back.
Tender wood ...

In the absence of Gerhard e Tika, we dragged Top Lamp with 4 people and a bit of help from the cows:

everyone carried at least

→ down → up → down on Friday

→ up → down → up → down on Saturday

and then some ...

(We carried 6 full cases in 4 days - ≈ 48 miles, we reckon)

The decision to stash Alison was ~~probably~~ ^{not} worked on the grounds that it was hasty and undesirable for all concerned. To's gear just survived, but two pairs of wellies eventually took Alison's place in F71 whoops.

A minor fiasco ensued yesterday with the van having to be dragged out of the Lagos mud by the Trana landrover; consequently this morning saw us camping in a layby nr La Mohica some 12 hrs behind schedule. A quick trip by Alison e Rob to collect the Hoyo la Madre detectors, and ~~the~~ the van range was on its way. A viva España e all that for another year ...

The big man at the wheel.

Next stop Biarritz. NDM

ps stocked up on Porsche e 43.

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To rectify some omissions from the Top Camp Log book...
ie writing up some trips that failed to make it into the
Top Camp log due to bovine emissions...

Rob & kev connect Canalizo 1 → 3. 14.8.97

The plan was to push, survey and dig. Ben & Rhys had left an undescended shaft (P28) and a wide open lead. Since the idea was to dig the parallel shaft back to the entrance and time was short, the original team also excluded Nobby. However, for reasons of apathy he never made it out of Top Camp.

In the event, kev and I made fine time down to the lead, including a short pause by a popcorn castellation overlooking a pool of water with a rift disappearing under us. It was really pretty. Anyway, we got to the lead and kev ("boltmeister") stumped in a brace of bolts for a Y-hang. One deviation and natural rebelling later he was at the bottom. I started to follow.

"Someone's been here before..." ~~and~~ exclaimed kev. I looked about the shaft as I descended. It did look familiar. I reached the bottom and there was no denying it. We were in the Car3 extensions. The rift we had descended from was the same lead that JC and I had failed to enter on our ^{last} Car3 push, survey, dig (psd) trip. 2 survey legs were sufficient to ~~to~~ complete the sistema del Canalizo and no loop closure error because we didn't resurvey the Spanish bits and don't have their data.

The dig was more arduous than anticipated owing to the presence of survey gear, bolting gear, ^{extra} rigging gear, kev's heavy light and ~~about~~ ^{about} 400m of rope - not bad for a 200m deep cave. Nevertheless efficiency ruled and we were out by about 8:00 pm. Not bad for an afternoon start. Kev then carried rope down to low lags which I went up to Top Camp ready to psd D7 on the 15th but that's another story.

Rob