

## LEWIS JUCKES

Edited transcript of a recording of Lewis Jukes conducted by Chris Eldon Lee at his home at Great Ayton on 22<sup>nd</sup> May 2010. Transcribed by Andy Smith, 6<sup>th</sup> August 2010.

Disc 1, Track 1 [0:00:00] Chris Eldon Lee: *This is Lewis Jukes, recorded at his home in Great Ayton by Chris Eldon Lee on the 22<sup>nd</sup> of May 2010. Lewis Jukes, Part One.*

Disc 1, Track 1 [0:00:12] Lewis Jukes: Lewis Jukes, born in Durban, South Africa, on the 14<sup>th</sup> of January 1942.

Disc 1, Track 1 [0:00:20] Chris Eldon Lee: *And what were your parents, Lewis?*

Disc 1, Track 1 [0:0:23] Lewis Jukes: My parents came from different backgrounds. My mother was from a farm, fairly remote by modern standards, and my father lived, or grew up, in Durban, the biggest town in the area. His background was in retail, selling, that kind of thing.

Disc 1, Track 1 [0:00:44] Chris Eldon Lee: *What would you say was your first awareness of the existence of the Antarctic?*

Disc 1, Track 1 [0:00:48] Lewis Jukes: We learned about that kind of thing at school. I suppose this was the kind of lessons they thought should be taught to pupils in the Empire. But I can remember although we were told that there were several reasons why Amundsen reached the Pole first, the implication was that they were sneaky reasons and not good planning. I can actually remember looking it up in the encyclopaedia after that and seeing a picture, a drawing of Scott's men surveying themselves in there, and I could not really understand why it was so flat. I did not expect a pole but I thought there would be something.

Disc 1, Track 1 [0:01:28] Chris Eldon Lee: *Did you at that point have a desire to go yourself? Did it inspire you? To the Antarctic, I mean.*

Disc 1, Track 1 [0:01:35] Lewis Jukes: Not particularly, but it was one of many things that did intrigue me: travel, far-off places, unusual places, that kind of thing. Yes. It was just one of many.

Disc 1, Track 1 [0:01:48] Chris Eldon Lee: *You chose to study geology, which is not an obvious choice.*

Disc 1, Track 1 [0:01:53] Lewis Jukes: At school they gave us tests to do, which gave various scores, and then the careers teacher would come along and say 'This suggests you should be this and that.' I think it was a dispensing chemist or a meteorologist, they said for me. But for some reason she said 'I have just had some leaflets and here's one on geology, and I think it will appeal to you.' By golly it did. I looked at that and ever since then, yes.

Disc 1, Track 1 [0:02:19] Chris Eldon Lee: *What was it about geology which did appeal to you? Do you remember?*

Disc 1, Track 1 [0:02:24] Lewis Jukes: I'm not quite sure. I suppose partly learning about things which were already there, which you can see around you, but knowing an awful lot more about them. And just how much they can tell you further back the origin of the Earth, fossils, who knows what.

Disc 1, Track 1 [0:02:41] Chris Eldon Lee: *You had a fairly eminent professor, Professor King, who was one of your lecturers.*

Disc 1, Track 1 [0:02:46] Lewis Jukes: Professor King, yes. Continental drift was one of the big debating points. Well it had been for decades. But the general thing was that America rejected it completely, Britain was half and half. There tended to be stronger support in the southern continents because the geological evidence was stronger, and you could actually see it in front of you. If you were elsewhere, you had to read about it, and then you doubted the authors. He published an awful lot. Among other things, he managed to wangle a trip with BAS to Fossil Bluff because Antarctica was one of the continents that was important in this. Although he went to West Antarctica which is the wrong part; East Antarctica is where the evidence is.

Disc 1, Track 1 [0:03:36] Chris Eldon Lee: *Was Professor King instrumental in your joining FIDS, as it was then?*

Disc 1, Track 1 [0:03:43] Lewis Jukes: He was indeed. When he was in Britain for that, let's say to arrange that trip. The head of the geology in those days was a chap called Raymond Adie who was one of his past students, and Adie said to him 'If you want to send people across, either doctors (that was simply because they always had trouble in recruiting doctors) or one or two geologists. The idea was that if they did find this evidence for continental drift, they would recognise the beds and the fossils there as being similar to those in South Africa. So King came back, called in two of us from our class of five, final year, and suggested this to us. He said he could wangle it if we wanted. We both nodded dutifully and went out, round the corner, and the other chap burst out laughing and said 'This is ridiculous. We could get jobs paying good money.' I thought it was a good idea. Anyway, so I followed it up and he did not, and that led me to Britain and then to the Antarctic.

Disc 1, Track 2 [0:04:55] Chris Eldon Lee: *Well, you applied didn't you? Was that a smooth passage?*

Disc 1, Track 2 [0:04:58] Lewis Jukes: Well, yes. It was a little bit tangled. I wondered whether I could do it from South Africa but I was told: No, I had to be in Britain to apply in the first place. So I had to get across there and Adie said he could wangle a job for me at the university. Getting across was difficult. My father was starting a new business and money was tight there. I had none. I looked around and the money of those days it was hard to find any way of getting there for less than a hundred pounds. I looked at working my way across on a ship, but that was just when the first work permits for Commonwealth immigrants had been introduced and suddenly ships were being careful who they took for fear that if they took someone across who did not have the right permit, they might have the responsibility of taking them back. I actually got a work permit and King lent me a hundred pounds which

just covered the fare on the cheapest airline, and I got there. I paid him back at the end of the year.

Disc 1, Track 2 [0:06:04] Chris Eldon Lee: *So you got to have your interview?*

Disc 1, Track 2 [0:06:07] Lewis Jukes: I got there for the interview. Well I worked for quite some months in Birmingham there which gave me an opportunity to get my background. There was the odd panic there in that I had already got photographs. They said bring two passport-type photographs to the interview. In fact Adie had warned me in advance to get them, and on the train down I checked my things and I had not got them. I had forgotten them. But I had always been told in South Africa ‘If you are in London and you are stuck, ask a bobby.’ So when I got there for the interview, they were running late, so I nipped outside, asked a bobby. He told me where there was a fast studio. I had to go down the tube and up the other side. They took my photo but they said ‘It won’t be ready for an hour.’ So back I went, and they were even later and they said ‘Did you mind?’ I said ‘Not at all.’, dashed down, got these and presented them, still smelling of fixer. They did not say anything about it; probably saw the funny side.

Disc 1, Track 2 [0:07:10] Chris Eldon Lee: *So do you think at any point they were doing any kind of psychological testing on you before you went South or was it all a bit more casual than that, this interview?*

Disc 1, Track 2 [0:07:21] Lewis Jukes: Oh no, it was casual and also (it was some years later) someone saw an interview in a magazine with Bill Sloman, who was the Personnel Officer then, and they asked ‘How do you find people?’ He said ‘There are various routes: universities, journals where we advertise; but “We know people who know people.”’

Disc 1, Track 2 [0:07:48] Chris Eldon Lee: *Professor King?*

Disc 1, Track 2 [0:07:51] Lewis Jukes: Indeed. But when someone read this out in Birmingham to the other geologists, everyone chuckled and said ‘Yes, you know, there’s plenty of evidence of that.’ I think they prided themselves on their ability to spot people.

Disc 1, Track 2 [0:08:05] Chris Eldon Lee: *Did you have a theory about why they selected raw recruits, or newly graduated recruits?*

Disc 1, Track 2 [0:08:12] Lewis Jukes: I think because they were more flexible. Bearing in mind, as I said, you had to go to Birmingham and so on. I think if you tried to get an established academic, they would be less flexible, either in moving there if they had family or established. I just think it was more convenient back then. Also I think it was seen more as an adventure, rather than purely academic. I am not trying to downplay the academic side but it was pretty physical getting the academic side done. It was probably just easier, and cheaper (salaries).

Disc 1, Track 2 [0:09:05] Chris Eldon Lee: *Of course, yes. Was there a bit of a gap between being told ‘Yes’ and sailing?*

Disc 1, Track 2 [0:09:11] Lewis Jukes: Right. I cannot remember how long (I could check from my letters) but there was probably a couple of months. They recruited me and another chap had turned up, like me, a chap called Mike Ayling, a month or two later. He worked as a research assistant too (so-called) at the university. I do not know how he had been wangled. They then hired three others. Mike Thompson who was actually a graduate of Birmingham University and two with Irish connections: Guy Stubbs and Julian Pagella. So they all turned up there: five of us. There were various courses we had to do. There was Survey; we had to do this in case we had to do our own surveying. In fact it was a bit of a free holiday. The Lickey Hills are to the south of Birmingham, not far from where we were. There is a golf course there but it seems to be a public golf course. It is used as a public park; people walk and take their dogs through it, and we were sent there to map this. We spent a lot of time just sitting back and watching the squirrels and all sorts.

Disc 1, Track 3 [0:10:38] Lewis Jukes: Then there was the so-called Cambridge Conference, which was a thing in itself. This is where they bring together all the new recruits for a week in Cambridge and you get instruction on various topics. After that, there are two Survey ships which went down. There was the *John Biscoe* and the *Shackleton*. For Halley Bay they chartered a Danish one which was the *Kista Dan* at the time. Now that was more expensive. It was reputed to cost £360 a day, charter. This was when our salaries down there were £550 a year. So it was quite a substantial sum. So they sent them down at the last minute. We left in early December whereas the others had left a month or two earlier. Yes there was quite a delay, preparing bits and pieces.

Disc 1, Track 3 [0:11:45] Chris Eldon Lee: *Was there any Health and Safety training, or preparation for the conditions?*

Disc 1, Track 3 [0:11:49] Lewis Jukes: There was nothing other than the Cambridge Conference. There was probably something on safety; I cannot remember whether there was. Oh dear.

Disc 1, Track 3 [0:12:09] Chris Eldon Lee: *You don't have to remember, it's all right.*

Disc 1, Track 3 [0:12:10] Lewis Jukes: No this is in... I have written it down so people are going to see it one day, any way. At the end of the Cambridge Conference, we were told that our lot, this year, had been the worst and most disgraceful group they had ever seen. They implied that there was no time to recruit more people to 'tip you lot out.' Although it was only a small number. Now there were two things that had precipitated this. One was: the first talk was an Introduction, I think by Fuchs probably, something like that, formal. The next one was shown as 'Physiology' and the chap turned up there, a doctor, and said 'Right, it says Physiology but this is on venereal disease.' He then proceeded to list all the things you could catch in Montevideo where, he said, 'You will find it unfamiliar, in that it is an active and above-ground industry. You will have girls coming straight up to you and propositioning you. All these things you can catch there. None of these can be cured in time to send you down and back again. You catch anything and you will be brought back. Furthermore, we might enforce clauses of your contract.' There were certain clauses saying that if for some reason you had to be sent back, you could be charged with your transport or the cost of sending out a replacement and all sorts. Anyway, he

gave quite gruesome descriptions of what you could catch there. Some people said this was an inappropriate time.

Disc 1, Track 3 [0:14:10] Lewis Jukes: We heard funny sounds at the back. Some of the fellows had been drinking too much before this and there were a couple vomiting in the back of the hall, though this lecture. Surprisingly they did not stop or tip them out or anything. The guy just glared up there each time there was another gasp and a splatter. Weird! Anyway, that was not enough. Whether it was the same or different people I do not know but we then; one thing on the schedule was a tea party in Sir Vivian's back garden, which was just across the road, virtually. Some fellows went into the local pub, looked round at the local girls there, and said 'You know we are off to a party. Who wants to come with us?' And they turned up with some questionable females there which was not what Sir Vivian felt he had invited into his garden. So, yes, we went down as the most disgraceful ones they had seen.

Disc 1, Track 4 [0:15:15] Chris Eldon Lee: *Did the lecture on the dangers of Montevideo pay off or did some of the Fids ignore it?*

Disc 1, Track 4 [0:15:22] Lewis Jukes: To the best of my knowledge, everyone observed it closely. Not so the crew. One of them was reported to be getting antibiotic injections from the bosun after we left there and what amused us was that he had been getting them all the way down the Atlantic from his adventures in Southampton. He had only just cured the last infection and there was not enough in the system to protect him there. So he obviously knew the routine.

Disc 1, Track 4 [0:15:58] Chris Eldon Lee: *When you arrived in the Antarctic, I presume you went in via Stanley, or what happened?*

Disc 1, Track 4 [0:16:06] Lewis Jukes: Right. We sailed from Southampton. Our first stop was Montevideo for a day or two. Then to Stanley for a few days and picking up kit. Then to South Georgia for a couple of days. In South Georgia we met I think it was the *Shackleton*; one of the Survey boats and there was much changing of personnel. We picked up a couple of people including Sir Vivian; people important enough to fly down rather than spend three weeks wallowing at twelve knots all down the Atlantic. We picked up Sir Vivian there and we transferred him and he went off to the Peninsula. From South Georgia to Halley Bay and it was the same on the way back, so all I saw was Halley Bay, a stop each way at South Georgia and a stop each way at Stanley.

Disc 1, Track 4 [0:17:02] Chris Eldon Lee: *What were your first impressions of the Antarctic, having waited I think nearly two years to get there?*

Disc 1, Track 4 [0:17:09] Lewis Jukes: It depends what you mean by the Antarctic. If you mean the ocean, two things happened. One was that those who were keen to take photos tended to stay up and as each night got later, bearing in mind that in South Africa I was not used to long late nights, because in a latitude of thirty degrees if the sun was still up at eight o'clock, that was late. So I did not quite realise I was staying up, not going to bed until it got dark. Suddenly I realised it was not going to get dark. The other thing that was so common was; it would come up in slide shows later during the winter at Halley Bay when someone would show a picture of an iceberg

taken on the way down, a tiny berg on the horizon because they were exciting then. 'There's one; quickly, on the horizon.' Of course by the time you got close to one you had taken a dozen photographs and you did not bother. So you found all yours were of distant ones.

Disc 1, Track 4 [0:18:12] Chris Eldon Lee: *And the continent itself, when you got to see the scale and the size and the majesty of the Antarctic, round the Weddell Sea and that area. Did it move you at all or was it just a 'here we go'?*

Disc 1, Track 4 [0:18:19] Lewis Jukes: No I am afraid my mind is a bit prosaic. I am not the artistic type. No. Other people went into raptures but I was more matter-of-fact. But also, Halley Bay, it is not scenic like the Peninsula. I don't know if you have had descriptions from other people there.

Disc 1, Track 4 [0:18:52] Chris Eldon Lee: *Please.*

Disc 1, Track 4 [0:18:53] Lewis Jukes: Yes. Ice shelves form all round the Antarctic where conditions are right, but basically they tend to be about ninety feet above sea level at the surface and they go down about six hundred feet, and they are floating. Which means that if you moor on them, there is no obvious tide. But it is just flat on top and most of the way there are cliffs, at the front. This is what Scott called the Barrier because he sailed along it for long distances and there was no easy way up. The thing about Halley Bay, that is why the base was set up there, there was you might say a large crack, perhaps half a mile across, and windblown snow had built up into a ramp there so you could moor the boat at the bottom and drive up the ramp. You drove up there and onto the surface of the ice shelf and it was just flat, I won't say as far as you could see because thirty miles away, if you look carefully, you could see high ground. But it was just flat, and even when you got to the base there was little other than masts and posts and bits and pieces showing around. Yes, let us say it was not as inspiring as some of the photos you see in other parts of mountainous areas.

Disc 1, Track 5 [0:20:12] Chris Eldon Lee: *So did you have a sense of disappointment then about where you were going to be for the next two years?*

Disc 1, Track 5 [0:20:17] Lewis Jukes: No, no. I had heard about this from in particular a chap called Denis Ardur. Now Denis Ardur was not a geologist; he was a glaciologist, but he had been with the geologists at Birmingham. So I had spoken to him a lot. I had seen his slide shows. He was one of the two first people to sledge to the mountains and set foot on rock there. So yes I had heard about this but as I said it just was not the awe-striking sight, inspiring sight that you would see elsewhere

Disc 1, Track 5 [0:20:56] Chris Eldon Lee: *Well let's be a bit more domestic, then. What did you make of the conditions and the state of the Halley base at that point? It wasn't in the best of conditions, was it?*

Disc 1, Track 5 [0:21:04] Lewis Jukes: It was not as bad as it was a couple of years later, but no. To me I accepted it as it was. To me this was just a stepping stone on the way. I wanted to do the geology, just as King had been continental drift. I believed it; a lot of people did not. I wanted to go out and help find more evidence and that was a

promising place. Whatever the conditions were there, that was just part of the route I accepted.

Disc 1, Track 5 [0:21:44] Chris Eldon Lee: *So the collapsing roof and the drifts and the wet carpets?*

Disc 1, Track 5 [0:21:50] Lewis Jukes: There were always discussions from time to time about whether enough was being spent and things like this. My attitude was: if someone had complained a year or two before and they decided 'Right we will save money.' they might have saved it by not sending me. I would rather be there and put up with the dripping roof. Unfortunately the year after a lot of people did not see things that way, and the next year was very different. But that was my view. Whether others saw it in quite such an extreme view ...

Disc 1, Track 5 [0:22:32] Chris Eldon Lee: *You were there for one season or two seasons?*

Disc 1, Track 5 [0:22:34] Lewis Jukes: Two. Well, it is best to count them as winters. I was there for two winters.

Disc 1, Track 5 [0:22:40] Chris Eldon Lee: *So did it deteriorate in your time?*

Disc 1, Track 5 [0:22:41] Lewis Jukes: Not greatly, but the attitudes changed. The '60s were a time of great change, both technologically and socially. You have to be very clear about just where you are in the '60s. A year or two one way or another and a lot of things are different. When we left, on the ship, the Beatles, with hair almost touching their ears, this was considered disgraceful, alarming. No-one appeared on the television, no pop singer or pop musician, without a tie and jacket. Things were like that then. You only have to go a year or two on and suddenly things were starting to loosen. Satire was pretty rare. You got 'Beyond the Fringe', but even that, I think, only came to prominence around then. Up to then, if you see any old recordings, film recordings, of interviews with government ministers or whatever, they are grovelling. This was part of the post-war thing. Discipline had won the war and hierarchies, and you kept to it.

Disc 1, Track 5 [0:24:02] Chris Eldon Lee: *So just can you give me an idea or an example of how attitudes changed in the two years you were at Halley? How the attitude of the average Fid changed toward the living conditions?*

Disc 1, Track 5 [0:24:13] Lewis Jukes: It was not just the living conditions, it was just some cynicism generally. When the boat came in with the new people, halfway through, I was out in the mountains and I did not see them for a couple of months. So quite what their reactions were I do not know. I have heard this said, that they expected hot and cold running water in the bunkrooms. The only running water you would have got was the drips, and the only hot and cold running water we had was: there was in the kitchen but there was in the washroom.

Disc 1, Track 6 [0:24:56] Lewis Jukes: Conditions, yes they were pretty spartan. I am told they expected more and from their attitudes there was also a view expressed at times that they thought we were there for purely political reasons, not scientific. We

had certainly mentioned that; that came up in our discussions, but we regarded it as it was: there was valuable scientific work. I saw my geological work as going that way. The work on ozone there was what showed about the ozone hole. But the view was that if we were only there for political reasons, and that no-one was ever going to pay any attention to the results, because they were just a fig leaf, did it matter; did you have to take that much care over it? Did it matter if you got something wrong or made it up, or made a hash of it? There were signs of that at times.

Disc 1, Track 6 [0:26:03] Chris Eldon Lee: *Signs of rebellion, then, in the second year? Or is that too strong a word?*

Disc 1, Track 6 [0:26:06] Lewis Jukes: Yes. The base leader, Dudley Jehan the year before: ‘Cuddles’ as uncuddly Dudley. He was introduced to us by that name and it seemed quite alarmingly intimate, but surprisingly soon you would just take it for granted. He was a base leader and people generally obeyed him. His decisions were generally wise and he knew what he was doing and he could usually help with things. The next year it was Phil Cotton. Now Phil Cotton, he was probably one of the best people there to be the base leader. He was a very diligent, well-meaning person and a very competent engineer, which was his background. He did not have the charisma that Dudley J had had, and people began to question: ‘What does a base leader mean? Can he give orders or when a job is to be done, does he have to be the first one in the work party that goes out? Or can he just say “You, you and you go out and dig.”’ I do not know if anyone actually refused to do things, but there was obviously much more tension. There were other reasons behind this too, but partly I think it was that specific instance that within a year or so they changed the title to Base Commander. Whether that would have changed things much for Phil Cotton, I don’t know. But certainly, yes, he had a much greater problem keeping people facing in the right direction.

Disc 1, Track 6 [0:28:00] Chris Eldon Lee: *But I mean according to the reports from the time, Cotton was pushing very hard for the base to be rebuilt, wasn’t he? In his first report, first base report at the end of his first year, he was saying: ‘This base must be rebuilt as fast as possible.’*

Disc 1, Track 6 [0:28:15] Lewis Jukes: He said, yes. There were several buildings there. It depends how many people you send down, you see, because perhaps it was partly IQSY (the International Quiet Sun Year) that there were more people down there, but when the new hut in ’61 was built, the idea was the old one was to be abandoned and it wasn’t. We were still in there; my bunkroom was in the loft of that. It was still being used a year or two later. This tended to happen. They then sent down a new office block, but that did not mean that the old ones were abandoned; they were just allocated to other people. Yes, old huts kept being used. There were other things where it was perhaps more urgent, and that was the generators, which were perhaps I should not say on their last legs but they were definitely...they needed a huge amount of attention.

Disc 1, Track 6 [0:29:27] Chris Eldon Lee: *There is a reference to the ionospheric programme being abandoned because the mini-generator at Coats failed and that seems to be typical of a series of technological disasters, shall we say, that you suffered in those two years.*

Disc 1, Track 6 [0:29:41] Lewis Jukes: Right, yes. Station Coats. For more details you would have to interview either Lol (Lawrence) Dicken or Phil Goodwin. I actually looked into that in some detail because I wrote up a chapter on that, and I have not been in touch with Phil Goodwin since 1966. But Lol Dicken, he actually read what I wrote and gave more comments and so on. Yes, they had little petrol generators. These were nothing like the ones on base which were diesels. These were just small things and they broke down. They lasted a few weeks, or a month or two, but the point was that they had no real backup, because if anyone had said to them 'Backup', you would have looked at it the other way and said 'Look. If the generators won't work, you shouldn't be going there.' Their whole idea was to do scientific work with scientific instruments. 'If there isn't going to be any power, call the whole trip off.' So yes, when these broke down, they found themselves in an uncomfortable situation.

Disc 1, Track 7 [0:31:07] Chris Eldon Lee: *So the three things working together, the technological failures, the condition of the base and the greater expectations of the incoming Fids, did all that combine to produce a kind of (what's the word I am looking for) a sense of (now I have lost the word Lewis; I am having a senior moment). Was it a sense of deflation, a sense of frustration that was creeping through the base at that time?*

Disc 1, Track 7 [0:31:36] Lewis Jukes: Yes there were. One must not take it too far. There were achievements. Let's say there were traditions and catch phrases and so on set up. Fun was had and all sorts, but yes it was definitely let's say a less purposeful year or attitude than there had been the year before. Another thing which contributed to this is that when I arrived there, my year, the first thing we had to do was build a new hut. This was the new office block. Now pretty well everyone benefited from this, because even those who did not get offices (and we didn't) but we got the old met office when the met men moved there, and so on. So it was a bonding experience. It went well. I don't know if you heard about the troubles with the 1961 huts – items missing of all sorts, in huge quantities. Everything went well, everything was there. It went according to schedule; it went up fast. As I said, it was a good experience.

Disc 1, Track 7 [0:32:58] Lewis Jukes: The next year (now I missed the beginning of this because, as I said, I was out in the mountains, doing my geology) they had a balloon shed to build. Now the plans had not arrived; the components had but not the plans. They were doing frantic scheds with Stanley, with people trying to explain to them. But this is a large complex item, and huge numbers of components of funny shapes. The other thing, now this also disillusioned the incoming people, there was a carpenter on base. 'Yippee, he will do it.' 'Oh no he won't. He's been sent out to the mountains as a field assistant.'

Disc 1, Track 7 [0:33:42] Lewis Jukes: Now here we digress. For those two years when I was there, they had not sent down field assistants. In other years, and on other bases, they do: general assistants (gash hands). They did not, and therefore someone had to be picked, or two people from other jobs which presumably they had been sent down to do because they were needed there, and one of them happened to have been Tony Baker, the builder, who was out there with me and with Dai Wild. So they got a couple of civil engineers, who were in the incoming people, and Munro Sievwright

who was the deputy base leader. He had some knowledge of such things, and they struggled away. Also, building it did not have the general attraction of the office block which was to everyone's benefit. This was only for the met men and on one or two occasions there was a feeling that they were not pulling their weight in the shifts. It was completed but it was not a happy bonding experience as the other was. There might be another possibility, that I went in with 'stars in my eyes'; I may have seen it better there than I did later. I may have been waking up to one or two things.

Disc 1, Track 8 [0:35:09] Chris Eldon Lee: *The word I was searching for earlier, in my senior moment, was morale. So what was it, despite of all this, that kept morale going?*

Disc 1, Track 8 [0:35:16] Lewis Jukes: Well for a start, there is no alternative. You are there until the next boat comes. [laughs] It is a unique experience. You can do things that no-one else can. You can take photographs. You can see things. You have time to do certain hobbies. I had been to see emperor penguins with their eggs. The holiday route now: you can actually be flown in to see them in spring with chicks, not with eggs. Probably before long you will be able to fly in and see them with eggs. But I don't think anyone is going to allow you to take them back and have scrambled egg when you get home. Now there's a unique one. No, I think the main thing was that there was not any alternative. But it was more, let's say, their views on BAS and so on. There were other things. If you read Sir Vivian's book, he tells about morale on base, how it is passed on from one group to the next, and how each group pick up the ethos of the existing ones. And occasionally, he says, that all goes wrong and the only thing to do is to clear out the lot and send in entirely fresh. I do not know whether he began to see us that way. He could not really clear everyone out but... where was I going with this?

Disc 1, Track 8 [0:37:01] Chris Eldon Lee: *You were talking about morale.*

Disc 1, Track 8 [0:37:04] Lewis Jukes: Yes. Once again (I keep saying this), I was out in the mountains. There were four of us. I was the geologist; Dai Wild was the surveyor; we had two assistants: Tony Baker the joiner/ carpenter and Simon Russell (Russ) the radio operator. So there were four of us there. There were two people at Coats: Phil Goodwin and Lawrence Dicken (Lol Dicken). Now when the new people came in (if I remember rightly the numbers), I think there were eighteen of them coming in and eight there. So eight imposing their attitudes on eighteen is never going to be easy, and also, just by chance, I think that the people who were there by nature tended to be a more thoughtful group and the people who came in, there tended to be more extroverts among them. I think their attitude, it was not perhaps imposed on the other eight but it was not the other way round. The other eight could not really establish...

Disc 1, Track 8 [0:38:25] Chris Eldon Lee: *They didn't meld?*

Disc 1, Track 8 [0:38:26] Lewis Jukes: They did. No, let's say the eight could not shape the attitudes of the eighteen to what we had considered normal the year before. Of course, if you ask one of those people, they might say that we were a dull bovine bunch, accepting terrible conditions and bad organisation, accepting it blindly, and we

should have seen what was happening. One of them can say that when you interview them.

Disc 1, Track 8 [0:39:04] Chris Eldon Lee: *All right. Let us talk a bit about the work, shall we? Let us move on to positive things. I am just interested; you talked about King's continental drift theory. Was this still quite early in the concept of continental drift theory at that point? Are we talking about trying to prove a theory? Were you out there to try and help him prove his theory?*

Disc 1, Track 8 [0:39:25] Lewis Jukes: Right. Continental Drift is actually over a century old. The first thing that people noted: the shape of South America. If you shoved it across the Atlantic and tucked it under the armpit of West Africa, it fitted nicely. It was Wegener, a German, who really put this forward. Others had just noticed and mentioned. He said 'I think they have moved apart.' Other people took this up. It was the southern continents, South Africa and Australia, which seemed to be most convinced because the geological evidence is most clear there. You find one continent here and one there and the geology is remarkably similar and you say if you assume that, it would be easier to explain. Sorry, I am gesticulating.

Disc 1, Track 9 [0:40:23] Chris Eldon Lee: *You brought your hands together, like two continents being put side by side, yes.*

Disc 1, Track 9 [0:40:30] Lewis Jukes: This was in the '20s and '30s. Some people in Britain began to accept it. The Americans were completely against. There was also the question of which way you start. Do you start with a mechanism or with an observation, and I am afraid here my comparison is with lightning. If Sir Isaac Newton had looked out and seen an electrical storm, and said 'Look at the lightning', in my view those critics in America would have said 'Ah but can you say what causes it? If you cannot say what causes it, you cannot believe it.' Because that is what they said. They said there was no force known that could move continents about, and the general view was that they were ploughing through the ocean like ships sailing through perhaps an icy sea, whereas now it is known that they move with part of the ocean plate around them. The mechanism was not known, but regardless of the mechanism, as with seeing lightning in the sky, you may not know what causes it, but it is pretty obvious if you are in the southern continents that it is there. Well let us say that is how it seemed to King and that is how it seemed to me and a lot of others.

Disc 1, Track 9 [0:41:50] Chris Eldon Lee: *So what were you doing to prove or disprove this theory? What were you looking for? Basalts in particular?*

Disc 1, Track 9 [0:41:57] Lewis Jukes: Yes, similar sediments. One of the interesting things, as a geologist coming here, that fascinated me was all the fossils. You could find seashells here in the limestone and all sorts, because from time to time here (Britain) the sea has covered the area and you have had marine deposits. Not in South Africa. In South Africa, when you look at all the sandstones and shales and whatever, pretty well all of them, they were in the middle of a continent; they were fresh water. It was obviously a long way from sea, and firstly this is quite unusual and secondly you then find you get the same in Australia and India and South America. You start to wonder where was the sea. This all seems to have been in the middle of a big continent, and secondly they all seemed to be similar in this.

Disc 1, Track 9 [0:42:51] Lewis Jukes: The basalts were distinctive, but also the sandstones below them and the fossils. There was a fossil leaf called *Glossopteris*; they look a little bit like a rounded eucalyptus leaf, elongated, but they are very distinctive in the southern continents. These two, they seemed to be the flora of a southern continent but not of a northern one. They were the kind of things that I would be looking for, although obviously you try not to go out with preconceived ideas. You go and map what you see, but you are hoping for what you are going to see.

Disc 1, Track 9 [0:43:35] Chris Eldon Lee: *So what did you find?*

Disc 1, Track 9 [0:43:36] Lewis Jukes: Quite astonishingly, one of the very first things I ran into was the basalt, and in my final year at university, five people in our final class, we went for a week or so up in the Drakensberg in South Africa, Natal, and hiking through these basalts. Suddenly I found myself: these looked exactly like the ones I had seen there about two years earlier. An amusing sideline there. I had gone to this place because there were some aerial photos taken by the Norwegians, or the Norwegian British Swedish Expedition ten years earlier, and I could see this area looked black and I actually thought it might be dolerite and I went up there. This was one of the first things I did when I moved into this area, to see it, and it turned out to be the basalts I was after. But also the weather was miserable up there. This was still spring and the surveyors, who were four thousand feet lower down, on the radio scheds they were saying about sledging in shirtsleeves, and it was cold and miserable and blowing. I got the samples; I went off and came back later, in the height of summer, for a better look. But we found those. We did find fossils – one patch – that was actually the next season, but there were enough, let's say, to show, to correlate quite clearly with other similar southern hemisphere examples. In fact they were sent to a lady in South Africa, Edna Plumstead, who was an acknowledged expert on these things.

Disc 1, Track 10 [0:45:29] Chris Eldon Lee: *What were you finding, flora or fauna fossils?*

Disc 1, Track 10 [0:45:33] Lewis Jukes: Flora. There were what were called trace fossils. These are where on the bedding planes, the surface of the rock, you find little lines and tracks where some invertebrates have crawled or cracked or whatever. Sometimes there seem to be little footprints on the sides of it. You never find the creature that made them but you can speculate. We did see some of those. I should really say 'I', because although there was always an assistant with me, he was just there really for safety and assistance. I was the only geologist in that area. But the plants, there was coal in one area, coal beds. But although there were plant fossils there, they were all fragmental. Basically they looked liked lawn clippings. They were just too fragmental to be of any use for identification. The difficult thing was to find a place where there were good clear examples.

Disc 1, Track 10 [0:46:37] Chris Eldon Lee: *Did you have a sense of excitement about what was going on or as was it all routine?*

Disc 1, Track 10 [0:46:42] Lewis Jukes: Wow, yes. [laughs]. You know, finding the basalt at an early stage; also the first time I got on to the sandstones there, which were similar to the ones that I had studied as a student and also as a schoolboy I had known well. Yes, there was that. There was another thing. When we started, when we reached the mountains, the idea was that the geologist from the year before, his name was Dick Worsfold, he would finish off. He had got a few things to round off, and I would work with him as an assistant and just pick up techniques for operating in that area, both sledging and climbing, that sort of thing. So the very first day we set off up this mountain, up a ridge, up the corner of it. It was a scramble but no worse than that, and I kept stopping to look at this and hammer at that and examine it. He kept shouting at me to keep up. A year later I found the same thing. Someone who was there helping me, he told later how the memory of this, how exciting that first day was on rock. Yes, fascinating.

Disc 1, Track 10 [0:48:05] Chris Eldon Lee: *You mentioned a geology office, which I guess was rudimentary I suspect.*

Disc 1, Track 10 [0:48:10] Lewis Jukes: Yes.

Disc 1, Track 10 [0:48:11] Chris Eldon Lee: *How much work could you do on the samples before you sent them back to the UK?*

Disc 1, Track 10 [0:48:16] Lewis Jukes: Well you say ‘sent them back’ We did not send them back for anything else. They came back with us and we worked with them ourselves, apart from specialised things like the plant fossils. I bundled those up and sent them to South Africa, to Edna Plumstead. The main thing you could do was make what we call thin sections. This is where you grind it down so it is thirty microns thick, and you look through it with a microscope in polarised light, and you can identify quite a lot. Now when Dick Worsfold came back, this would be in my first autumn (he had been in the field when I arrived), he came back with some of his samples. He wanted to examine them to give a lead to any things he should check on in the next season. We polished these things, we polished them by hand. There is a picture of Scott’s men doing exactly the same thing. We had no motor-driven abrasives or wheels or whatever, so what you did you just rubbed this thing with your fingers on a glass plate with carborundum, and ground and ground and ground. I forget how many; we may have turned out one a day, or something like that, but you have got a winter and there is nothing much else to do.

Disc 1, Track 10 [0:49:47] Chris Eldon Lee: *Is there any more you want to say about the geology before we move on to other things?*

Disc 1, Track 11 [0:49:52] Lewis Jukes: Geology.

Disc 1, Track 11 [0:49:53] Chris Eldon Lee: *At the end of it, were you more or less convinced by King’s...*

Disc 1, Track 11 [0:49:59] Lewis Jukes: Oh, I always had been. If you want me to give a quick example, from South Africa, not the Antarctic. Where I grew up, where I went to university, round Durban. If you look at the rock formations there, there is the Table Mountain Sandstone which is about a thousand feet thick I think, the Dwyka

Tillite which is a glacial deposit which is a couple of thousand feet thick, there is the Ecca Beds above that, there is the shale and the sandstone, each a few thousand feet thick and then the basalts. Because of the way things are faulted here and there, you can see them in all positions and none of these are tapering out as it they are coming to an end. It is the kind of thing which does show when it happens. The continental shelf there is only about ten miles wide and shwoosh [phonetic] down into the deep ocean. So did everything suddenly taper off over many tens of millions of years? Something had broken off. There was no other explanation for it.. There are few places where it is as obvious but no, I was convinced, yes.

Disc 1, Track 11 [0:51:19] Chris Eldon Lee: *Let us take a short break.*

Disc 1, Track 11 [0:51:20] Lewis Jukes: Yes, indeed.

Disc 1, Track 11 [0:51:21] Chris Eldon Lee: *We will have some tea and then we will come back and talk some more.*

Disc 1, Track 11 [0:51:23] [End of Part One]

Disc 2, Track 1 [0:00:00] Chris Eldon Lee: *This is Lewis Jukes, recorded at his home in Great Ayton by Chris Eldon Lee on the 22<sup>nd</sup> of May 2010. Lewis Jukes, Part Two.*

Disc 2, Track 1 [0:00:13] Chris Eldon Lee: *OK Lewis, let's talk a bit now about the work you did in the field, or your time spent in the field. You seem to have spent a remarkable amount of time actually away from the base, which may of course just be because the base was in such a bad condition. Or was it more positive than that?*

Disc 2, Track 1 [0:00:28] Lewis Jukes: No, that was not the reason at all. [laughs] The reason was simply to maximise the time available in the field. Travelling to the mountains... Well, first let us talk about the mountains. Halley Bay was on an ice shelf, and the nearest mountains, the Heimefrontfjella, and the closest subdivision of that was the Tottanfjella, were (route miles) 290 miles to get there. This involved the crossing of the rather dangerous junction from the ice shelf to the inland ice. So it was a major effort. Also because we had tractors that could only pull three or four tons at the most, and that was a struggle, to lay the depots and set us up. You had to live on what you could get there; let us say as much as could be pulled out. Most of the load being pulled out of course was petrol for getting there and getting back. So it was rather difficult but we wanted to spend as much time as possible. So there was no chance of coming back, say, halfway through.

Disc 2, Track 1 [0:01:44] Lewis Jukes: The pattern would be as follows (ideally). In early spring, as early as possible, when it was absolutely painful, you set out. You headed there and with luck you would arrive in the mountains just when it was comfortable enough to start doing work. So the trip out, yes, was uncomfortable. We would arrive there. Say this was my first season in the mountains. We would arrive there and there was me, as the current geologist, and the previous one, Dick Worsfold. Now the idea was that he would do a couple of weeks, or a week or two, of work cleaning up just a few loose ends, and then he would return with the tractors. We would be left there until autumn came and forced us to go back, to get the full time available. It meant we would miss the ship when it came in. So this could only be

done by people down there for two years. In your two years you only got one real season. But that was the way to do it. It worked and it seemed great. I found nothing wrong with it.

Disc 2, Track 1 [0:03:06] Chris Eldon Lee: *I have got some questions, if I may. We are looking between 207 days, continuous days in the field, which at that time was a record, wasn't it?*

Disc 2, Track 1 [0:03:15] Lewis Jukes: Yes. I think it was. I know the year before they did 182 but we went out earlier and stayed later. We did, it slips my mind, I have got it written down somewhere, 205 or 208; I am sure it did not end in a 7. Anyway, yes. It was all work of interest. This occurred to us when we were thinking about Station Coats that we mentioned, because when their generators broke down, they had sit there in the middle of nowhere for several months before a trip could be organised to get them out. We guessed it and, sure enough, we learned that when we spoke to them and it shows in their reports, boredom was extreme, and of course most uncomfortable. Never to us. Partly for me the geology was interesting, but the assistants too; half the time with Simon Russell, a radio operator, and then Tony Baker, a joiner. They joined in enthusiastically; they were interested in seeing the work done, and if we got held up, if we were lying up in a wind (a 'blow' as we would call them) there was impatience but impatience to keep working. The interest was there; the interest kept it going.

Disc 2, Track 1 [0:04:41] Chris Eldon Lee: *So it just did not get to you, this long long period away from humanity?*

Disc 2, Track 1 [0:04:44] Lewis Jukes: No. There was one time when I felt I wanted a brief holiday, and let us say I fiddled things. But it was just a short sledge trip, on a day with pleasant weather, and I went off by myself and left Tony behind. I thought it would give us each a day by ourselves. As much as that in six or seven months is hardly a ...

Disc 2, Track 2 [0:05:13] Chris Eldon Lee: *Well how much of that seven months was actual practical working time and how much was spent in lying up? Half and half?*

Disc 2, Track 2 [0:05:20] Lewis Jukes: Hard to comment on this. My memories are that the lie-ups were a small proportion, and then when I look at my diaries, suddenly there seem to be a lot more than I remember. I would guess thirty to forty percent was lying up, but my memory now is of the action not of the lying up.

Disc 2, Track 2 [0:05:47] Chris Eldon Lee: *And you never panicked about being out there for so long on your own, and getting back, and being in touch?*

Disc 2, Track 2 [0:05:54] Lewis Jukes: We had a few frights and panics.

Disc 2, Track 2 [0:6:00] Chris Eldon Lee: *Such as?*

Disc 2, Track 2 [0:06:02] Lewis Jukes: Right. Perhaps chronologically: the one was where I hit my thumb with a hammer and thought I had broken it; it was just badly bruised. It would have been a nuisance if there had been a broken bone. We would

probably have splinted it with a couple of pencils, or something like that. It would have healed over the time. We certainly would not have gone back or anything. Not long after that: I had a pair of sunglasses that I used to wear rather than snow goggles, when I was on rock. I had got them some years earlier. I thought these looked 'cool', and I was hammering away at some rock and a piece about the size of a marble went through a lens. It had not registered with me these things had got green glass lenses, flat lenses obviously, and I got splinters of glass in my eye. So I called Tony Baker who was there and he fished them out with a corner of my hanky, and he was sure he had got them all out. He said it seemed to break into fairly big bits. He did not think there were any small ones that he had missed but I was still pretty worried.

Disc 2, Track 2 [0:07:24] Lewis Jukes: Anyway in a panic I went up to the tent. It is hard to think why but the tent was just safety; that was where you went. So I went there and we got out the first aid bag and there was a book there of instructions and to our surprise there was quite a lot on things in eyes. It said there are three important things to do. The first is do not use a dirty hanky to fish things out. The second is do not use an eyebath. We had actually got two. I had got one in my own private little medical bag and there was one in our own first aid bag, and third go to a hospital as soon as possible. So we thought that was two we were missing out on; we would try and do the third and observe that and that might do as radio sched and the doctor said 'Use an eyebath with warm salty water.' so we broke the third one too and did that. The other thing that worried me in that medical book. It said the real danger with glass in the eye is actually a day later because it makes tiny surface cuts and bacteria take hold, and you think you have cleared everything up and a day later the bacteria, as they multiply, you really find out about it and then you are in trouble. So I was on edge for the rest of the day. But happy to keep working; no point in stopping. Even after the end of that day I thought there are not many bacteria down here. Perhaps they are slow to get going. After the third day I realised I was OK. But it was a bit of a worry.

Disc 2, Track 2 [0:09:41] Lewis Jukes: Then, at the end of the season, suddenly there was soft snow all around us, and we only realised later, or we remembered, the previous year the people had had soft snow in autumn. What happens is, I guess, that as the sea ice clears (the sea is over a hundred miles away) you get moisture, water vapour, in the air there more than usual. The sea is only going to be at about nought degrees. Then this air, you only need a wind of about five knots, and in twenty four hours five knots will have taken you well over a hundred miles and it will be with us, this moisture-laden air, chilling over the cold snow and rising up the slope. It was so deep. We were fifty miles from a depot and we felt that it was not worth trying to get there. We would not cover it while we still had food. A better ploy was to go on small rations and hope/ pray that it went. It did work but not the way we thought. Firstly we did not have the discipline to cut down rations early enough. Secondly it took longer to go than we expected. But it did go, and we had some worrying times.

Disc 2, Track 3 [0:10:41] Chris Eldon Lee: *What about just the human nature side of things: no fresh underpants; not having a bath for seven months. Did that not matter?*

Disc 2, Track 3 [0:10:51] Lewis Jukes: It did not worry me. It was part of life. Clothes got a bit dirty on base even, although you could wash there once a week. No, once again I just accepted that. That was the way you did. Quite how the others saw it,

I think they saw it much the same. Standards change slightly with different generations. Some of the earlier expeditions, not that many years earlier, you read where they did not wash dishes; they just scraped things clean. We always assumed that we had got enough paraffin for the primus to have warm water to wash dishes. But equally, other things we did, people a year later they might have thought that they advanced, got more civilised, one step beyond us.

Disc 2, Track 3 [0:11:45] Chris Eldon Lee: *Did you never feel vulnerable, that you were so far from assistance, shall we say? Or did a young twenty-something-year-old man not think about that too much?*

Disc 2, Track 3 [0:11:57] Lewis Jukes: No. In particular, when the last tractor left, the ones that had brought the goods out for our depot, that could sustain us through the six months, and they left and there we this feeling that 'We are on our own now.' But it was not frightening. It was wonderful. It was exhilarating. This was all ours. No, it was fantastic.

Disc 2, Track 3 [0:12:21] Chris Eldon Lee: *Can we turn if I may, now to the events of that autumn, and in particular October, when you were on the Halley base and you were out in the field, and news began to filter through of a serious incident with another party, and the deaths of Jeremy Bailey, John Wilson, and David Wild, who went into a crevasse on a Muskeg. Let us just go back a little bit.*

Disc 2, Track 3 [0:12:47] Lewis Jukes: Can I just correct you?

Disc 2, Track 3 [0:12:48] Chris Eldon Lee: *Please.*

Disc 2, Track 3 [0:12:49] Lewis Jukes: It was spring.

Disc 2, Track 3 [0:12:50] Chris Eldon Lee: *Of course it was. October was spring. Base leader Cotton says in his diary that he was a bit pessimistic about that spring journey before it even began, because of the tight timetable to get the survey results back in time to get them on to the relief ship, and he felt perhaps that he was pushing the men too hard. When the accident happened, he blamed himself. Did you get any sense of any recklessness, shall we say?*

Disc 2, Track 3 [0:13:20] Lewis Jukes: No. With Phil, no, I think he did the best he could. If anything I think he may have felt obliged to cover for Dai, David Wild, Dai he was known as. Dai was one of his closest friends, and it looked as though Dai, to some extent, could have been to blame. I think he might have felt that there was a degree of covering needed. But he obviously felt guilty; it happened on his watch. But I think there were so many pressures on him to go the way he did. Yes, he was running things close to the edge, but everyone did. The first people who went to the mountains, Arduis and Johnson, they depoted their radio to save weight, because they knew that if they got there, nothing could be done to help them anyway. They were on their own, they went out there. They reached there, recorded it and plans were made for future work. There was a similar one a year later to the mountains to the north, Vestfjella. Blundell and Winterton went there, and once again, they were beyond the limit of any support that could have been given.

Disc 2, Track 3 [0:14:45] Chris Eldon Lee: *So you were still very much in the heroic era, where risks were taken and bravado was still acceptable, was it?*

Disc 2, Track 4 [0:14:54] Lewis Jukes: Yes. I mean obviously caution was needed to some extent, but yes, you pushed things to the very limit; that is how you got there. Well let us say that was the example you saw if you looked to the past. Certainly if Phil had said 'Look, I think we ought to call this off' he would have been called a coward by everyone including me.

Disc 2, Track 4 [0:15:25] Chris Eldon Lee: *Oh, really?*

Disc 2, Track 4 [0:15:26] Lewis Jukes: Oh yes.

Disc 2, Track 4 [0:15:27] Chris Eldon Lee: *Peer pressure?*

Disc 2, Track 4 [0:15:29] Lewis Jukes: Oh yes. There would have been muttering about ... And the other thing: BAS had sent down surveyors. They had sent down a geologist. They had sent down instructions for a field programme. If he was looking for guidance from BAS on whether it was do-able or not, they clearly thought (we hoped they read our reports) that what he had got was enough to carry out such a programme. So it would have looked as though he was falling short of everything if he had called back. The one thing that might have done it was that the mechanics advised that the tractors were not up to it. The tractors were showing their age, but there were two ways of looking at this. On the one hand you could say that they were clapped out; on the other had you could say that they were well-tried; we had found their weaknesses and found ways around them. They had made half a dozen trips out to the mountains successfully. We knew how to do it. No, he was in a very difficult position.

Disc 2, Track 4 [0:16:45] Chris Eldon Lee: *Can you take me through the sequence of events, as you recall them, from your perspective, starting with the fact, I believe, that there was a decision to divide the exploration party into two groups and you were in the 'other' group.*

Disc 2, Track 4 [0:16:58] Lewis Jukes: Right. From the start we had known, those who calculated the petrol... I rather kept out of that. It was largely Dai and Phil Cotton who did this. I was in on it a little bit, but my heart was not in it. I think the mechanics, the tractor men, were a bit resentful that they were not consulted because they would have put a more pessimistic view on it. Anyway we thought that improvisation would be necessary when we got there, depending on how much petrol there would be when we got to the mountains. Now we approached them heading eastwards, roughly. The Heimefrontfjella run roughly east or northeast from there where we arrived. In the previous years we had been working along them, and the area where I wanted to finish off (as Dick Worsfold had the year before, I would have a week or two to finish off) and was the very far end. So I would be continuing almost eastward.

Disc 2, Track 4 [0:18:09] Lewis Jukes: At right angles to this, north or even slightly northwest, was Vestfjella. Now that was where Ian Ross, the other geologist, was going. So yes, the party had to divide, and the surveyors were going to carry on up the

Heimefrontfjella as I was. So we reached Pyramid Rocks, which was the first depot in the mountains. Several things happened. One tractor was already giving trouble, using too much oil and the clutch was in trouble, and another one the universal joint on the drive shaft broke within about a mile of the depot. We got that far. We actually used the other two to tow it there. So they replanned; they had planned that two tractors would head northish to Vestfjella.

Disc 2, Track 4 [0:19:06] Lewis Jukes: Now Dai's original plan, which I thought was a bad one and Simon Russell thought was a bad one, was they would go all the way to Vestfjella, because near Vestfjella was a crevassed zone. Dai's view was that if he kept east, the further east you went the more it petered out. I had seen it from a distance; Simon Russell had sledged over it with him, and both of us thought that was pushing the luck. Anyway we now decided that was out. It would be one tractor and it would stop short. It would not go over any crevasses. Now this route was thought to be completely clear of crevasses. It was the way that Dai Wild and Simon Russell had travelled to and from Vestfjella the season before. So it would be safe to go with one tractor only. Meanwhile I could do my geology at the far end, and so with a team of dogs (not my old team the Hairybreeks) I think it was the Beatles.

Disc 2, Track 5 [0:20:20] Chris Eldon Lee: *I am sure you are right. That is correct, yes.*

Disc 2, Track 5 [0:20:23] Lewis Jukes: I have forgotten that; I would have to check. I went with Rod Rhys Jones. They would not pull. We had trouble here and we had trouble there. It was something that I could not believe. I thought it only to beginners because the year before, with the Hairybreeks, everything had gone well. We were supposed to be towing stuff anyway, moving stuff for depots. Anyway we got there, and what I wanted to do as my last task: I was still looking for plant fossils, and thinking about where we had been the season before, I thought there was one area that looked promising. I thought 'If we find them anywhere, they will be there.' So we went there.

Disc 2, Track 5 [0:21:13] Lewis Jukes: It was at the top of a big mountain so we camped at the bottom and we climbed about a thousand feet, walked along, and we actually found these things. Yippee! We came back with our rucksacks loaded up. The next day we were going to really thrash it and perhaps even move the tent up. We got back for the sched and that was when we heard about the accident, which came in very faintly because we had the 119 set which was more powerful. A 68 set came in. In fact when first we heard it I did not realise what it was and I kept transmitting over it. Base had to tell me to get off. So we were asked to go back. When we heard what had happened, I said 'Look, if they have died, we cannot change it. Can we have another day, because we might never get here again?' No, everyone had to go back.

Disc 2, Track 5 [0:22:07] Chris Eldon Lee: *This was Phil Cotton's decision was it?*

Disc 2, Track 5 [0:22:11] Lewis Jukes: I don't know. I think it was Phil Cotton. It was the right one but it disappointed me. We made fantastic time back because we were now travelling downwind and there was a blow. We put up the tent as a sail and we really covered some ground. We and the dogs were exhausted when we got there. We got to Pyramid Rocks. Now what had happened: the people who set out heading

north, towards Vestfjella, the first day they did about twelve miles and camped. The next day they had a long run and they were doing what we call 'towing the dogs'. The dogs were clipped to a rope between two sledges in the tractor load. The dogs still had to run all the way but they did not have to pull any load.

Disc 2, Track 5 [0:23:04] Lewis Jukes: Near the end, as you know, the tractor dropped down a crevasse which was not supposed to be on this route. Ian Ross had not done much with dogs. He had been a tractor driver on the way out. I did not think this was a good idea; I did not think it was disastrous but I just thought it was not the best way of doing things. I thought he ought to be learning dogs. Dogs were part of his geological equipment as much as his hand lens and his hammer. He now tried to drive back with the dogs and the dogs did not accept him as a leader. Everything went wrong. They would not go. At last, Bodach the leader decided to accept him and a couple of the troublemakers just beat him up instead, and Ian did not know how to stop fights. In the end he managed to get them back but it took him about three or four days.

Disc 2, Track 5 [0:24:03] Lewis Jukes: Then the only radio that they had working was a 68 set and they could not get through easily. But when he got there he found the two tractor mechanics who were working on the tractors and he told them the story. So now at last they got through with the 68 set. Reception was so poor that basically it came down to the people on base asking them questions and they would just send a CCC for 'Correct Correct', rather than try and send much information. Now we were told to come back. Rod Rhys Jones and I were probably about 80 or 90 miles away. Geoff Lovegrove and Tony Haynes, they were at the other depot, Bird Rock, halfway along, about 50 miles away, so although they were told to stay and wait for us, they thought better if they got going because otherwise it would be a shame if they held up the party. So they set off back and they got back and Ian told them the story. A day later Rod and I got back. So when we heard the story from Ian it was the third time he had told it in about three or four days, and from what I gather from the others, the story that they heard was the same as they had heard before, but it got slightly shorter, which is understandable. I certainly had been worried about Ian's mental state after what he had been through. Might he be in some sort of nervous condition? Absolutely not. He just behaved absolutely normally.

Disc 2, Track 6 [0:25:54] Lewis Jukes: Anyway so he told the story of it. We went there following the tracks, which was easy. There was the tractor down and Doug Beebe, who had got climbing experience, he went down on a rope to see what he could recover. There were bits and pieces. There was a bit of equipment. Jeremy Bailey had been doing ice depth radar; there was part of his electronic equipment. What we had really hoped for was Dai Wild's survey results. He kept them all in a leather satchel that he took everywhere with him. We knew that was in the tractor but it was invisible and the whole thing was crushed. There was no way it could be... So the work would have to be redone. That was it. The three bodies were crushed there. Doug Beebe then came out. There were people belaying him from above. We had got beams over the crevasses; they were bridged so we could run back and forth. There was all sorts. He did have a struggle coming back up, and at one point part of the bridge fell down and bopped him on the head one, which he did not like. Because of course the question was: 'Could Ian have gone down there, to try and help Jeremy Bailey?'

Disc 2, Track 6 [0:27:26] Chris Eldon Lee: *At the time of the accident?*

Disc 2, Track 6 [0:27:29] Lewis Jukes: Yes, at the time of the accident.

Disc 2, Track 6 [0:27:30] Chris Eldon Lee: *Jeremy did not die straight away, did he? He was the one that lived for a while?*

Disc 2, Track 6 [0:27:34] Lewis Jukes: Yes, I will just come back to that in a minute. He could perhaps have gone down. I frankly doubt whether he would have been able to get back up. Getting out of a crevasse is very difficult. Ropes cut into the side, bridges fall back on to you, and all sorts of things. There was a good chance he would have died if he had gone down. Of course we only have Ian's account; we have to assume that it was true, but I have got several reasons for believing that because I did consider that at the time. Basically one person was staying out on the sledge to watch the dogs, because when they were being towed (as we called it), if one stumbled it could be dragged along and could be injured. The others might attack it. At that point the person watching would wave frantically. The driver would see in the rear view mirror and would stop.

Disc 2, Track 6 [0:28:39] Lewis Jukes: It was Doc John, John Wilson's turn to be outside. Now John Wilson was always cold, rather as I was actually the year before, and he was feeling uncomfortable and not happy about staying out. Ian said he was all right, he would stay out and do another one, he felt comfortable. Also, they were passing about eight miles from what is now called Mannefallknausane but we called Stella Nunataks. He wanted to just look at those and see if he could see any geology. They started off and they soon coasted to a halt. He stood up to see what was happening and the tractor had gone. What he could see had happened; it had gone halfway across, and then the rear end had broken and had dropped down. It had broken away from the A-bar of the front sledge. One would have hoped that might have held it but it did not. The tractor dropped backwards. Now we had two kinds: one of the original low cab and one with a high BAS-designed cab, which was very useful. You could camp in there, effectively, but it was fairly flimsy and it just crushed forward as the crevasse narrowed and squashed everything inside it. It got so far down and the crevasse was narrowing. You got to the incompressible things like the substructure and that was where it wedged.

Disc 2, Track 7 [0:30:19] Lewis Jukes: The front sledge continued, slid over the rim, but the A-bar impaled on the far wall of the crevasse and so it stopped there. Anyway he rushed up and looked down. His first thought was to throw a rope down. He grabbed a climbing rope, tied a loop on the end, and looked round for something to hook it to. There was what we call a pigtail, a curly piece of metal for hooking ropes to, on one of the Maudheim sledges. Now of course the front runner was precarious there on the edge of the crevasse. If that slipped it might take the next one over but he was not thinking clearly. He put it on, this loop he had tied, on the pigtail, and threw the end of this coiled climbing rope down the crevasse. As it dropped down, each coil flipping clear of the coils, the last one as it flipped just lifted the loop off the pigtail. Knot, loop and all vanished down and he had lost his climbing rope.

Disc 2, Track 7 [0:31:31] Lewis Jukes: Round about then the sledge that was wedged on the lip shifted and he realised that he had better move other things, so he quickly moved the dogs and the tent and things, in case everything else went down. He kept going back and shouting and that was when Jeremy shouted that he was alive, and shouted back that he was... Ian said something about 'Hey, I will come down and help you.' Jeremy said 'No, no. I am all smashed up. Get out. Save yourself.' It is all written down. There is no point in my trying to give those again. The gist of it was that it was not worth it. He asked about Dai and Dai was also dead. Anyway he was, he still kept saying things like 'I will do something' but to be honest he was not quite sure what, where would he moor it because this was on a bit of a slope. The best way to go might have been from the other side. How could he safely get across the crevasse? Suddenly Jeremy started coughing and choking and gurgling – dreadful sounds – and this carried on for a minute or so, then vanished and that was the end. There was no more. Obviously the shouting up, the effort was too much and triggered something off.

Disc 2, Track 7 [0:33:06] Chris Eldon Lee: *That was the story you heard from...?*

Disc 2, Track 7 [0:33:11] Lewis Jukes: That is as we got it from Ian Ross.

Disc 2, Track 7 [0:33:14] Chris Eldon Lee: *How was that at the time?*

Disc 2, Track 7 [0:33:16] Lewis Jukes: How was what?

Disc 2, Track 7 [0:33:17] Chris Eldon Lee: *Listening to that story, at the time?*

Disc 2, Track 7 [0:33:21] Lewis Jukes: I am afraid I just took it as it was. I did not burst into tears or anything. I knew by now, we had been sledging hard, and knowing that they were dead, we had heard it. No, it was upsetting but I suspect if their spirits could have sent a message down, the message would have been 'Keep on with what you are doing. Carry out the task that we would have done.' But just another point. Was Ian telling the truth? Now if he had been wanting to change things. For a start, that about losing the climbing rope, it showed he was in a state of blind panic. He could have left that out but he left it in. If he was trying to ease people's feelings he would not have mentioned that about Jeremy living on. No, if he wanted to change it, the obvious things were not changed. Also there was nothing that we could see there, no signs, he had no hesitation about the idea going back. It was not as if we were going to see something that he had not mentioned. So I am convinced that his description is accurate.

Disc 2, Track 7 [0:34:40] Chris Eldon Lee: *Was there a, I want to use the phrase 'post mortem', but that implies a physical one?*

Disc 2, Track 7 [0:34:47] Lewis Jukes: No.

Disc 2, Track 7 [0:34:48] Chris Eldon Lee: *Was there a discussion afterwards about why it had happened and what could be done to prevent it from happening again?*

Disc 2, Track 8 [0:34:53] Lewis Jukes: I do not think there was a question of preventing it again. These things are such a one-off. There was a question of why,

because this was thought to be a crevasse-free route, as plotted by Dai. Later, one thing that was speculated was that it might have been failure to allow for the magnetic declination. That they may have been following a compass course whereas the bearing was a true one; the difference was eleven degrees. This puts you quite a few miles across. Later in the season, when we got back to the base, Rod Rhys Jones was clearing out the survey things and he found some of Dai's notes and papers, and there was a map with the route plotted. The true bearing shown was the magnetic bearing that had been followed. So it does look as though that was, not the cause of the accident, that was the cause of being on a route where there were crevasses. The cause of the accident was that they did not see the crevasses, because when they stopped, that time that I mentioned, and changed people on sledges and so on, and also where they put in their route-marking flag, if you looked around you could actually see the first of this family of crevasses off to one side. So they were too much in a hurry that way. They were not...

Disc 2, Track 8 [0:36:33] Chris Eldon Lee: *They were not observant enough.*

Disc 2, Track 8 [0:36:36] Lewis Jukes: You could say, of course, that if they thought they were on a safe route there was no need to do so. But very often accidents need several causes; one is not enough. Something else will act as a safety check, but yes.

Disc 2, Track 8 [0:36:53] Chris Eldon Lee: *In "Of Ice and Men", Fuchs goes on to say that one of the contributory factors was that they did not run the dogs in front of the tractor. That if they had run the dogs in front of the tractor, the dogs would have found the crevasse first, or indeed have refused to go because conditions were so poor. But it seems from what you were saying and other accounts that it was common practice to run the dogs behind the tractor.*

Disc 2, Track 8 [0:37:21] Lewis Jukes: Yes. The first thing is you have to take great account of your situation. In some situations you do one thing, in others you do another. On the inland ice, travelling to the mountains, a couple of hundred miles, open, not much happening, yes we towed the dogs as we called it. Having them running, being pulled by the tractor, effectively. We travelled in whiteouts and so on, in poor visibility, because it was a flagged route and we knew there were no crevasses. For one brief spot, just after Depot 240, there were a few crevasses, and everything changed. Dogs were unhitched; they travelled separately. Careful examination of the ground. I do not remember whether the dogs always travelled ahead then because it was a known route, but it was a known crevasses route, you see. So you adapted your behaviour and your techniques to what the situation was. They were running the normal routine for a crevasse-free route, and that was the problem, that they were off it.

Disc 2, Track 8 [0:38:36] Chris Eldon Lee: *They were not alert, because of that?*

Disc 2, Track 8 [0:38:37] Lewis Jukes: No, but also they were not on the route they thought they were, probably because of the magnetic declination that had been overlooked. But had they been where they thought they were, they were using the correct routine. As for Fuchs, Fuchs was a great individualist. We used to ask 'Does he read reports?' He did read reports. You would find hand-written comments on them. I do not think he took in what was there. He just fitted that to his views. He has

written in half a dozen places about how his dog Darkie had supernatural powers. Darkie could detect crevasses, not just that other huskies could. He described specifically how 'Darkie finds them; others don't.' Equally, when there are shadows or lines on the snow that are not crevasses, Darkie knows to ignore them and other dogs jump away in alarm. This is only in the Antarctic. Once it is no longer dangerous, when they are in Cambridge, when he took Darkie back, Darkie then panics at lines on the road. He is allowed to be fallible when it is safe, but in the Antarctic he assumes that dogs were magic. All lead dogs, his was magic, but that is not so.

Disc 2, Track 9 [0:40:05] Chris Eldon Lee: *What are your memories of Jeremy Bailey and Dai Wild and John Wilson? What sort of chaps were they?*

Disc 2, Track 9 [0:40:10] Lewis Jukes: A base that size, 30/ 32 people, it is big enough for you to gravitate into groups of your own. You have closer and less close friends, without needing any enmity or anything. Jeremy Bailey was not in my group. It will be interesting if you interview any people from our time to see how they describe me. I was very naïve and childish, in my behaviour as well as my attitudes, and I think one or two found that a bit much. Fortunately there were a few others who were perhaps similar, so I got on. He was rather more sophisticated, like Rod Rhys Jones, and for that matter Doc John. So he was not a close friend. Dai Wild was a very close friend because we had been in the field together. His image, he liked an image of rough, ready. When work was to be done down the toilet shaft, which was a pretty mucky job, he eagerly volunteered for that. It was in his image. He liked to show that he was slap-happy. He was in charge of the trip out to the mountains. When safety was necessary, he did it. That group of crevasses that I mentioned, he specifically changed routines as should be done, but that was certainly the image that he gave.

Disc 2, Track 9 [0:41:46] Lewis Jukes: John Wilson: I think here perhaps some of us thought 'Ah, doctors are doctors. They are all the same.' The year before it was Gordon Bowra who was out there as an assistant, and he was a fairly robust fellow, very manual. I can remember seeing him with carpentry tools, cheerfully fitting out his new surgery in the new office block. A very practical fellow. John Wilson was rather more sensitive and nervous. I don't know that he was the best person to send out there. I hoped that he would pick up, as I did. Once or twice going out I was exceedingly cold and unhappy about it, but that was only for a day or two; the rest was fantastic, and I hoped that he would suddenly find how wonderful it was, just as I had. But yes, he was cold and miserable for quite a bit of the journey, and that, as I said, was what put him in the cab on that last shift.

Disc 2, Track 9 [0:43:10] Lewis Jukes: Jeremy Bailey: brilliant fellow, very sophisticated. If anything, I slightly resented him. He was too modern and to me the Antarctic was driving dogs and living on meat bar and doing it the rugged way. He wanted to make the most of what new technology offered. He could use transistors, (Wow!) not just valves, in his electronics; that was modern. To be honest I had to revise my views when I heard about him calling up to Ian. To me before then, heroism in the Antarctic was how many miles you had covered with a dog sledge or how many days you had been out in your tents. Jeremy, what he did there, telling Ian not to come down, I put that higher than Oates going out and leaving Scott and his lot. You know

the details of that one, I presume. Oates, the winter before (and this is in Ponting's book; he records this), he had said that if any of them was a drag on the others, he should be given the option of a pistol to shoot himself. So it was not a new thought to him. His feet has been frostbitten and rotting for days and days. He had already asked the doctor, Wilson, several times 'What shall I do?' obviously hoping for some kind of hint like 'Here is all the morphine; take it and kill yourself' or whatever. When he went out, he had little option really.

Disc 2, Track 10 [0:45:14] Lewis Jukes: Jeremy Bailey, on the other hand: it was a snap decision. As he remembered it, the last thing he knew was the scientist still conducting a successful programme, and suddenly he realised that all he had got left was a few minutes or maybe an hour of rather painful life, and he got some quick decisions. What might I have done? Might I have shrieked for Ian to come down and give some Omnopon (the morphine that we all carried)? Jeremy Bailey told him 'No.' As I said, I think the courage necessary there goes beyond Oates or anything like that. So, yes, I was impressed.

Disc 2, Track 10 [0:46:00] Chris Eldon Lee: *In a small base, to lose three men has a major impact on the survivors. With thirty-odd men at Halley, was the impact the same, or because you were in different social groups... Did those three deaths cause a big pall over Halley Bay? If so, for how long?*

Disc 2, Track 10 [0:46:20] Lewis Jukes: It was about six weeks, of course, before we were back at the base. So we only have to take what we heard. I heard that there was a little bit of division to some extent, with some factions saying, blaming the others. Some who knew that the mechanics were unhappy about the tractors and saying that the whole project was doomed, and others... There was a bit of a first year/ second year division there, and for that reason... I mentioned that Rod Rhys Jones found that map. He was first year and I was second year of course at the time. But even so, we agreed that we would not tell anyone, and we didn't, for fear of stirring up divisions, resentments, whatever, which, with luck, had faded away.

Disc 2, Track 10 [0:47:13] Chris Eldon Lee: *Somebody had to do the work that Dai Wild had done, all over again, didn't they? Was that a difficult task?*

Disc 2, Track 10 [0:47:19] Lewis Jukes: Well of course it could have been all abandoned but yes, it was. That was Geoff Lovegrove and Tony Haynes (who now calls himself Patrick). In fact he has gone by several different names at different times and bases. They stayed out there. I was astonished that that was permitted because a lot of decisions made around then were made over-cautiously, in a sense of panic. They were allowed to stay out, just one sledge by itself, out in the mountains. They beat our... I think they were about 212 days or 215, something like that. That will probably be hard to beat nowadays without support, but yes, they had a great time and they remapped it. Geoff Lovegrove was an exceedingly thorough and meticulous, accurate person. We got excellent maps from him and Tony Haynes gave him good support. He could get on people's nerves a bit on the base, but out there, basically, the same characteristic seemed to come out as a determination to get a job done. They did well.

Disc 2, Track 10 [0:48:42] Chris Eldon Lee: *Well a final point on that subject is that the BBC World Service actually announced the news of the three deaths which surprised me when I read that. In some respects, to hear it on the BBC makes it all the more poignant, doesn't it?*

Disc 2, Track 10 [0:48:56] Lewis Jukes: We did not hear it that way. I am not sure what you mean.

Disc 2, Track 10 [0:49:00] Chris Eldon Lee: *The BBC World News carried the news of the loss of three men.*

Disc 2, Track 10 [0:49:03] Lewis Jukes: Well yes. I do not know. I am not quite sure what you are getting at. But remember it came from us to Halley Bay, to Stanley, to London, and it will have gone from there to the BBC.

Disc 2, Track 10 [0:49:17] Chris Eldon Lee: *But then to hear the news come back at you again, on the World Service?*

Disc 2, Track 10 [0:49:19] Lewis Jukes: I did not hear it. I presume they did on the base. I know my parents did and they were upset because it said the names were withheld until the next of kin were informed, but one was a doctor and one was mapping the mountains. The last message they got from me was that I was sledging with the doctor because I shared a tent with him the previous month. We just rearranged groups, parties, only a day or two before. They wondered whether that meant me.

Disc 2, Track 10 [0:49:51] Just one other thing, though, before we drop this one. When we got back to base, or some time afterwards, a message came down from London that the fact that Jeremy had not died instantly was to be kept secret. The public story was that all three died instantly, and we were to be sworn to secrecy. Phil Cotton, as base leader, put this all to us when we were all in the lounge. We tended to gather there, usually on a Saturday evening, when he would give any announcements or whatever. I, for various reasons, thought this was a bad idea. For one thing, it showed what courage he had got. All right he may have suffered, but he was dead, one way or the other. Anyway, but we were not being asked for our advice; we were being told what London had decided and done. I kept this and, as far as I know, most other people kept that even though it was very difficult because when I got back to all the other geologists from other bases, they all wanted to question me closely.

Disc 2, Track 11 [0:51:07] Twenty years later I was working for British Steel and someone told me he had seen my name in a book. I just said some good things. 'Oh it mentioned that there was an accident and you were there.' 'Yes. I was in the area.' Other people in the room were listening now and he was explaining to them: 'A tractor fell down a crevasse. Three people, two died instantly; and the other guy could shout up and tell the one on top what happened.' 'What? Who wrote that book? Which cad has broken ranks and broken his vow?' Sir Vivian, the guy who extracted the promise from us, and I was furious about that. I wrote a ratty letter to the Survey, but he had retired. Though I got a sympathetic letter back, they had got their own current problems and they did not know about secrets twenty years ago. But the point was: for all I know there might be some of our people who are still keeping it a secret.

That was in about the mid-eighties. In 2006 I met one of our guys and found he had only just found out. He was as angry as I was.

Disc 2, Track 11 [0:52:21] Chris Eldon Lee: *One final point. How were your parents reassured?*

Disc 2, Track 11 [0:52:26] Lewis Jukes: I do not know.

Disc 2, Track 11 [0:52:27] Chris Eldon Lee: *They somehow picked up on the fact that it was not you.*

Disc 2, Track 11 [0:52:32] Lewis Jukes: I do not know. Perhaps the names were released.

Disc 2, Track 11 [0:52:35] Chris Eldon Lee: *Let us move on. We have about fifteen minutes of time left. Let us move on to slightly happier events. I want to hear about Midwinter celebrations if I may, because apparently Halley Midwinter celebrations were quite spectacular at times. There was one year when you had a cook who was a bit accident-prone. Is that correct?*

Disc 2, Track 11 [0:52:54] Lewis Jukes: Someone was. Who, I will leave history to say some other time.

Disc 2, Track 11 [0:53:02] Chris Eldon Lee: *Fair enough.*

Disc 2, Track 11 [0:53:03] Lewis Jukes: Yes, my first year there, the *Halley Comet*, our magazine, which actually in previous years had been produced later to come out in about August or so on, with a struggle. But this year they decided to bring that out for the Midwinter celebrations. It came out. There were balloons, Christmas decorations out starting a few days before. A good meal. The meals always followed our standard routine. There were the guests (usually it was for the birthday people), and there were the speakers; it could be a surprise speaker. There was the Loyal Toast and so on. No smoking until we had toasted the Queen at which everyone lit up. Cigarettes were free and most people smoked. Then there was a group who would put on a revue show for us, various topical items. Yes it was hilarious stuff. Another benefit was that the emperor penguins started laying eggs only a couple of weeks before, and so it meant you could have some egg dishes included in the food, because eggs were rare items down there. That one it all went very smoothly.

Disc 2, Track 11 [0:54:42] The other one was more memorable as you say. Someone in the kitchen, perhaps he had had a little to drink, at one point he was pelting the gashmen with prawns that were for the prawn cocktail. I do not know if it was the same prawns that were served up later or not; I am not a prawn eater. Something came with a funny tasting sauce; was it the prawns or was it the turkey? I cannot remember, and it turned out that it was the brandy sauce for the pudding had been served with an earlier one. But for me, the best and most memorable moment was when he came in with the flambéed pudding. He had splashed brandy on it, put a match to it, and as he rushed in, with flames trailing in the breeze, there was none on the pudding but his arms were ablaze and he did not seem to notice. He retired to bed fairly soon afterwards and the next day there were notes apologising. Opinions were divided.

Some people thought that this was utterly disgraceful; others thought it was: you could let your hair down. I was prepared to be in that group, as long as it only happened once a year, which it did, and it made that Midwinter much more memorable. Once again we had a film and a series of shows and skits and whatever.

Disc 2, Track 12 [0:56:28] Chris Eldon Lee: *There is reference in the log to a balloon flight. I presume this is not a manpowered balloon flight. Human ascent?*

Disc 2, Track 12 [0:56:36] Lewis Jukes: No, no, no. Every morning, at nine o'clock or something, the met men would launch a meteorological balloon. Below it was what we called a sonde. This was a lightweight transmitter that sent temperature, pressure, humidity as read all the way up. It had to get to a height of something like twenty kilometres. We mixed units; we had a complete mix there. It had to do that. Meanwhile they measured the signals, getting the data, and the radar followed it until it burst which you could tell immediately from the radar would suddenly pick it up coming down. Then they calculated; they sent these to Stanley. There were few things that could annoy the met men more than a delay or something wrong with it, like bursting halfway up, or the radar man losing it, or the transmitter going and the balloon continuing to go up. It was humidity; if that element failed it tended to be meaningless so they did not bother, but if the temperature or pressure one went, really they had to go through the whole routine again and they were annoyed.

Disc 2, Track 12 [0:57:58] Chris Eldon Lee: *So what was special about the Midwinter's Day balloon?*

Disc 2, Track 12 [0:58:03] Lewis Jukes: Oh. What they did, they plotted these things out on a long chart, the pressure and the temperature and so on, going up with altitude. They coded these up into numbers and transmitted them as a series of numbers to Stanley. On that day the numbers they coded, if you then decoded them and plotted them it gave a curvaceous female silhouette rather than... Whether they actually sent the genuine ones too, I do not know. [Laughs]

Disc 2, Track 12 [0:58:40] Chris Eldon Lee: *Let us just talk for a few minutes about your dogs. You had: your own team mainly was the Hairybrecks?*

Disc 2, Track 12 [0:58:47] Lewis Jukes: Hairybrecks, yes.

Disc 2, Track 12 [0:58:51] Chris Eldon Lee: *First of all, where does the name come from?*

Disc 2, Track 12 [0:58:52] Lewis Jukes: I spent a while trying to find this. I have forgotten the name (I have got it written down somewhere) of the chap, but there was a book called *The Long Ships* by Bengtsson which came out around that time, about 1960-ish. One of them was reading this and twice it mentions briefly Ragnar Hairybrecks. The action in the book takes place a generation or two later but they refer back to him and obviously he thought this was a good name and to me it was an inspired one. I liked it.

Disc 2, Track 12 [0:59:31] Chris Eldon Lee: *Did you name them yourselves, or did you inherit the names.*

Disc 2, Track 12 [0:59:33] Lewis Jukes: No, you inherited. Some people renamed them. One had arrived from one of the other bases. We just referred to them as the Hope Bay team, but then they were allocated to Dai Wild and he called them Beatles. No I not sure if he did that. Somehow they acquired the name The Beatles anyway.

Disc 2, Track 13 [0:59:55] Chris Eldon Lee: *It was interesting in that kind of in-between period, of dogs and tractors, or Muskegs, working side by side. Do you have any views on that? Did you have a preference?*

Disc 2, Track 13 [1:00:05] Lewis Jukes: Well I liked the image. It was the romantic side in me, doing it the old way. The machines, the Muskegs, were powerful. We had a couple of motor toboggans. They were dreadful. They were unreliable. Yes, they did perform some service, but virtually every trip that they made out from base, when they came back they needed major repairs. Quite often they had to be towed back by a Muskeg. They were just too flimsy in those days. We had these arguments (we argued about everything over winter). Jock Thompson, one of the mechanics, he was strongly for machines. 'The machine will always win because it is inexorable.' Well, they weren't entirely. What you really needed was the state where they were either more reliable, or where you had got something like air support where you could deliver spares and the like. In fact basically that is what happened. They became more reliable, yes

Disc 2, Track 13 [1:01:31] Chris Eldon Lee: *Sometimes men form quite strong bonds with their team of dogs, don't they?*

Disc 2, Track 13 [1:01:33] Lewis Jukes: Oh yes. Coming back, I find that I was not a dog man; I am a cat man, as you can see, because basically no dogs would really match up to them, to the ones I have had. To me they were the best team there was, even though in the second season, I nearly said they let me down. They were a disappointment, but they were older. Yes.

Disc 2, Track 13 [1:02:06] Chris Eldon Lee: *How did they disappoint you? Were they less willing, or ...*

Disc 2, Track 13 [1:02:10] Lewis Jukes: They would not pull. They were reluctant and when they did pull, it was not as well. But they were an old team and in fact they were older by more than a year because one of the youngest ones died over winter, and had to be replaced by one that had been pensioned off a year before.

Disc 2, Track 13 [1:02:29] Chris Eldon Lee: *The leader was Boddach?*

Disc 2, Track 13 [1:02:32] Lewis Jukes: Bodach.

Disc 2, Track 13 [1:02:34] Chris Eldon Lee: *Male or female?*

Disc 2, Track 13 [1:02:35] Lewis Jukes: Male.

Disc 2, Track 13 [1:02:36] Chris Eldon Lee: *Any characteristics that you remember?*

Disc 2, Track 13 [1:02:38] Lewis Jukes: Yes. He enjoyed the perks of being a leader. You allowed him to get away with various things. Certainly he was not happy with inexperience. He needed to know who was boss, but if he knew who was boss, yes he was good. Another odd thing: if you touched him, he would go completely limp and just collapse. We found this at various times. Once just out of boredom one evening, at a camp, we went round trying to see if we could get any of them to sit up, or teach then to do so. We got different reactions. Some of the tough ones; they just growled and said 'Look, I am going to pull the sledge, but I am not acting the fool.' and we left them. Some of the younger ones just got excited; thought that it was a game and scabbled around and did nothing. Bodach, we tried to sit him up, but as soon as you laid hands on him he just went flop, down!

Disc 2, Track 13 [1:03:50] Chris Eldon Lee: *You left British Antarctic Survey in '65/'66 I guess.*

Disc 2, Track 13 [1:03:59] Lewis Jukes: No. I got back to Britain in early '66 and then I spent about three years in Birmingham, writing up my results, which were published as a scientific report. I used it as a thesis and got a PhD.

Disc 2, Track 13 [1:04:13] Chris Eldon Lee: *Well done.*

Disc 2, Track 13 [1:04:14] Lewis Jukes: Thank you.

Disc 2, Track 13 [1:04:15] Chris Eldon Lee: *What happened next in your life, because you ended up at British Steel?*

Disc 2, Track 13 [1:04:20] Lewis Jukes: Yes. Each year they recruit new fresh people and obviously others who have finished have to leave at the same rate. So after my getting the degree I looked around at jobs. Originally I had pictured going somewhere where there was more geology and mining: Canada, Australia, or something. Maybe South Africa again, but by then I had married someone local and she was not leaving England. So I looked around there and British Steel, that seemed to be something along those lines. It was not geological but it was dealing with geological materials, iron ores and that kind of thing. Yes I joined up. I found that a colleague was Denis Goldring who had been on the Peninsula nearly ten years earlier, and I stayed with British Steel until I retired, through its various changes and one or two moves.

Disc 2, Track 14 [1:05:19] Chris Eldon Lee: *Lewis, thank you very much indeed.*

Disc 2, Track 14 [1:05:23 [End of Part Two]

ENDS

## Snippets:

- A panic over passport photos. Disc 1, Track 2 [0:06:17]
- ‘The worst and most disgraceful group.’ Disc 1, Track 3 [0:12:17]
- The ‘physiology’ lecture. Disc 1, Track 3 [0:12:57]
- The Base Leader’s role. Disc 1, Track 6 [0:26:03]
- Differing attitudes in the first and second years. Disc 1, Track 7 [0:31:36]
- Building the balloon shed; no plans or builder. Disc 1, Track 7 [0:32:58]
- An exciting first day in the mountains. Disc 1, Track 10 [0:47:03]
- Record time in the field. Disc 2, Track 1 [0:03:06]
- Nearly running out of food. Disc 2, Track 2 [0:09:41]
- Seven months without a bath. Disc 2, Track 3 [0:10:41]
- Events leading to the crevasse tragedy. Disc 2, Track 4 [0:16:45]
- Ian Ross’s account of the accident. Disc 2, Track 6 [0:28:39]
- Jeremy Bailey’s last moments. Disc 2, Track 7 [0:31:47]
- Keeping a secret. Disc 2, Track 10 [0:49:51]
- Midwinter celebrations. Disc 2, Track 11 [0:52:35]
- A risqué met message. Disc 2, Track 12 [0:58:03]
- A floppy dog. Disc 2, Track 13 [1:02:38]