THE SOUTH AFRICAN NATIONAL ANTARCTIC EXPEDITION (SANAE) Chap 3 This chapter covers the planning and building of the first South African Base in (Queen Maud Land) Antarctica.

In 1961 a small group of scientists mainly meteorologist types were posted in a temporary base built there and used by Norwegians. They were South Africans, a mixed bag, under an Afrikaner leader.

The Dept of Transport wanted a bigger better base which could cater for up to 20 staff for a 12 monthly stint, year after year. This was handed to me in PWD Capetown to design prefab and erect. was given funds for contracts. I again used the vacant hangar Wingfield. The design was for a challenging set circumstances. It was to go on an ice cap. The site would be about 25 kilometers from the ice shelf but not on land. the ice at the chosen spot was probably 100 to 200 feet deep. buildings would be covered by the first blizzard and from then be "underground" and would sink down at several feet per year. At a guess about 10' each year. The buildings would be 250' connected by one long passage with hatches down from the ice surface. The first blizzard would bury everything. Blizzards occur at less than each fourth day. Each of the 20 to have his own space no matter how tiny. $(6' \times 6')$. The base would be heated by oil. Heat from the engine was run thro an exchanger that turned snow into water. Toilet facilities were calculated and a pit dug 30'deep 6'x6' across. The stalagmites of excreta would mount the 30' after some months and each person would take turn with a hammer at the base of a stalagmite. Windows were double glazed with air extracted an nitrogen filled. Light did filter down and into these windows. The walls floors and ceilings were identical 8'x4' modules 4' thick packed with insulation. Thus under a blanket of snow one could grab any panel and it would fit.

The materials would be taken to the site by Muskeg tractors. The japanese were building a ship for this expedition that would take all the parts of the base in her hold.

I formed a crew and had them put through a battery of tests at a government psychologists'office the main one being persitency on a given course. One member was a "political"choice. His father wanted him to "have the experience" He was a washout. I took him against my wishes.

The buildings were all packed in the hold of the ship RSA in Capetown dock with an ex-SA navy friend as captain. Huskies came on board. Muskegs. We were fitted out with Mukluks and other wintry equipment. At the last moment we found our engines in the bottom of the hold of another ship that had just arrived in the port. We pulled strings and got it aboard but even then we sailed too late for the season. There are only a few weeks to get to the Antarctic mainland anmd out again. We were 2 weeks behind safe schedule. We sailed. Jack Netterburg of the SA navy came along as observer. The crew of scientists on board were a friendly group. On the way down south every day my group rehearsed the plans for the speedy construction of the buildings. The ice bits we were passing were a gorgeous blue and green.

We reached th ice shelf (Bukta) and began to unload. First went the Met leader who planted black poles every few hudred yards to mark the route. He took one of my men who would wait for us in the second muskeg. They reached the chosen site and put down a pole. They left my man there on the understanding we were just behind. We were in fact broken down and they passed us on the way to the ship. When a couple of hours later we arrived on site we saw only a head running around the pole. He had got cold and scared and running around the pole to keep warm had worn a 5' deep rut in the snow.

The materials began to arrive on site. We had a packing case nearby with furs in should someone need to rest for a while. Franz my assistant and I had been working for about 36 hours and we went in this case for a rest. Failing to use the furs we both dozed then slept. I awoke to voices outside but could move no limb or tongue. I could painfully swivel the eyeballs and saw Franz was in the same predicament. The crew were working on the foundation thinking we were OK.No voice would come from my throat. Time went by. I gave up and left the body. Luckily before it was too late some came in felt the bodies called for help and painfully pummelled the bodies into circulation again. Another few minutes and I would not be writing this. We got up. The crew were now all tired and cold. So we slammed up one building put in a heater and all dived in. In minutes it was a welcome oven. WE organised into condition 11 with port and starboard watches and for the next two weeks kept going. The crew who were already there, in the Scandinavian base were upset at our progress. They explained that they had never had more than 4 days without blizzard. I shrugged and got on with it. Each day the same dire warning. Then the roofs went on and they felt easier. Then we reached the stage where the new Met crew could if necessary live in the buildings and complete the work themselves. The next day I sniffed the sky, ordered my men to pack instantly, fled under a blue sky to the Muskegs and bolted for the Bukta. As we arrived the blizzard hit the base. Next morning the base was under 8' of

The returning Met crew and my men caught some sleep and then we left the Bukta.

mooned We were late. We had been ashore 17 days which was as planned. But we had left Capetown 2 weeks late. The ice was thickening up and was 4' in parts some less some more. Each day it got thicker. We had to begin to reverse and then charge at the ice to make any headway. It was too slow. The ice would freeze us in at this rate. And then it did. We could no longer move. We were in TROUBLE. No matter what the captain did we could not move. South Africa had no way to get us out. A message went around the Earth to New Zealand where two huge USA icebreakers were stationed. they some time later began the long journey to get us out of it. Meanwhile back on board I organised talks in the lounge on any subject in which each member was knowledgeable. And with all those scientific brains we began to learn a great deal. But then I also discovered that the usual had happened in the old Scandinavian base with its South African crew. The close quarters were too much for some and they were divided into "camps" with

ueadly enmity between them. The main rift was between the medical man, a specialist neuro-surgeon and a very erudite and learned man and the leader, a Suid-Afrikaanse Boer. They were on the same pole but poles apart. The medico was very friendly with a smooth compexioned young member and this affinity it seemed construed as unnatural. A more pleasant medico I had not met. Eventually I had to let the medico unload his suppressed feelings which seemed to help quite a lot. (I listen well). One day however the surgeon, Ronnie Plotkin, wanted to discuss his subject, the human brain with me. I was not sure he needed my opinions but he insisted. I knew quite a lot about the mind but not too much about the brain. But he was a demon for learning new things. He had done much brain surgery in joburg and knew his subject cold. So he asked about the composition of the human mind and I explained this to him. He asked for some physical proof and I did that to his utter amazement. That floored him for altho he wanted not to believe it he could not see otherwise with his own eyes. Then he asked a question for which the answer was too much for him. For if shown to be true it would destroy for him the whole basis on which he operated as a neuro-surgeon for 30 years. And yet the insisted. I gave him his answer and he could see it was true but it was too much truth in one gulp. Ronnie asked that I never speak to him again. He had met his armageddon. Or soos 'n volstruis hy het sy kop in die grond gesteek.

The days went by. The same trash greeted our morning look over the side. The ice was mounting up to the bulwarks. I had planned a raft and rations so that when the ship was crushed I had a chance to survive until the ice-breakers arrived. It was the 39th day. We had run out of talks as the tension grew. That night I went to sleep wondering whether we would make the night. Early in the morning there was a sudden shaking and grinding of ice. The engines started. I dashed out and we were moving. An earth tremor had shaken the ice all the way out to sea and created a passage of clear water. In a day we were out of the ice and on our way home. The icebreakers changed course and headed elsewhere. But we

were grateful for the knowledge of their presence.

Back in Capetown they all went their separate ways and no doubt felt great relief to have others to talk with.

Ronnie will never be quite sure about the difference between the brain and the mind.

The South African people have a handsome Antarctic base and much more accurate weather forecasting (1962).

10 Years later I heard that the base still in use was about 70' down below the surface. Some 15 years later a new one was built above it.

The Transvaal was standing by while we were in the ice in case we called for any help that she could offer.

End of chapter 3

plans are in PWD Capetown (Myburgh or Kotze).