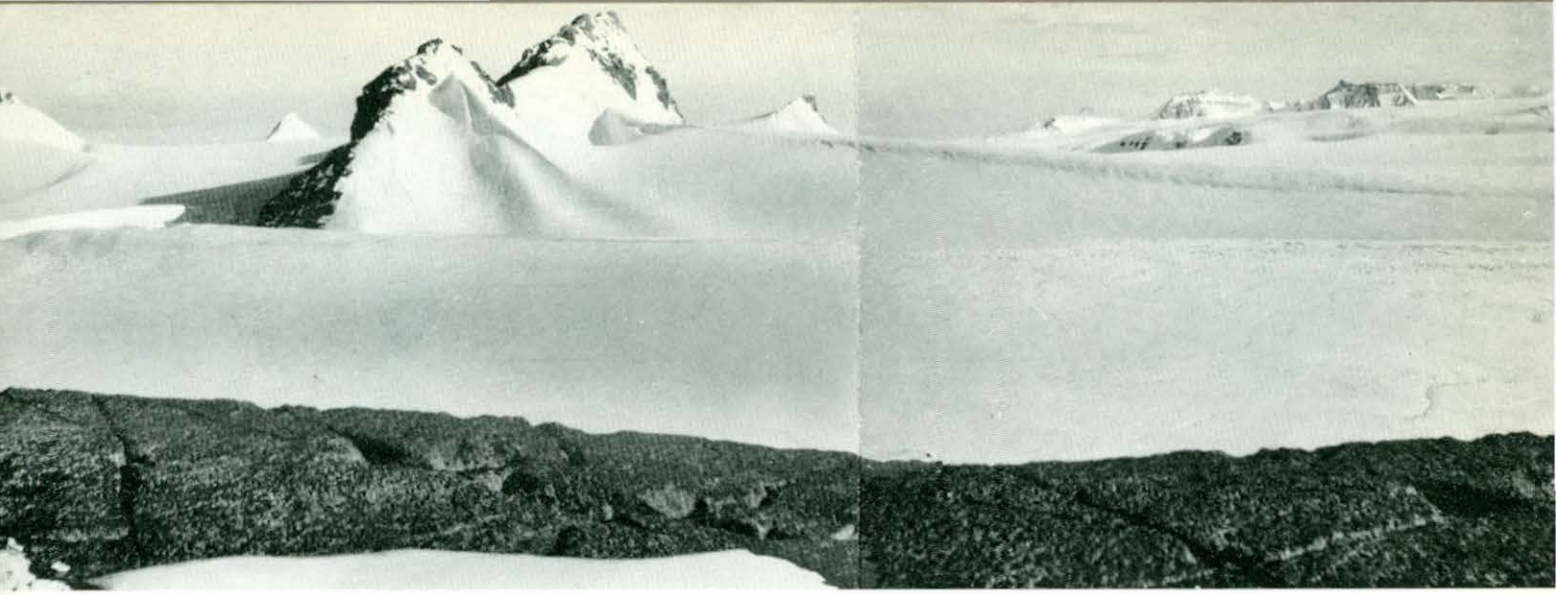


GEOLOGICAL SAMPLING IN THE AHLMANNRYGEN AREA

By W. H. POLLAK, Geologist, SANAE VI.

After weeks of meticulous planning Zac Ezekowitz, the geomagnetist, and I left on 10th October, 1965, by dog sled to do geological surveying in the Ahlmannrygen area. Our load consisted of 700 lbs. of provisions and apparatus. There was food for men and dogs for 25 days. This period would be extended by resupply from a mechanized support party for part of the way and from depots laid by previous field expeditions. Eighty miles of the vast Fimbul ice-shelf had to be traversed before the first nunataks would be reached.

In the late afternoon we reached the old base (Norway Station) where SANAE I and II were stationed during 1960 and 1961. We fed the dogs, pitched the tent and spread out sheepskins and sleeping bags, filled the pots with snow and cooked a meal of pemmican (a mixture of dehydrated meat and fat) broth, biscuits and butter. Establishing a camp soon became a routine which did not require more than 30 minutes.

While crossing the ice-shelf snow accumulation was measured at the markers which showed the route, and geomagnetic readings were taken at certain points. At **Dassiekop,** a small dolerite outcrop in the hinge area, we awaited the arrival of the support party. From there onwards the most difficult stage of our journey began. Probing each suspect feature with ice-picks for crevasses, we laboriously, though uneventfully, climbed 2,500 feet within a distance of about 15 miles to the safer highlands.

Zac, in front of *Kjolrabbane*, establishing radio contact with the base.

Finally we reached the Ahlmannrygen area and started on geological sampling from certain rocky outcrops for geochronological work. We ascended an isolated nunatak, consisting of andesitic lava, NW of **Snökallen,** thinking that we were the first human beings ever to set foot on it. However, on its summit we found a broken beer bottle! Our high spirits were further subdued when we had to sit out a blizzard lasting 9 days. In our sleeping bags we listened to the gusts of wind hitting the canvas. The only entertainment was the brief daily radio contact with the support party and SANAE base.

This unpleasant delay was compensated for when we started mapping in the SE part of the Ahlmannrygen. Here most of the nunataks were formed by a sequence of clastic sediments, consisting of yellowish-red sandstone-arcose, greenish siltstone and black mudstone, intruded by doleritic sills and dykes. At **Aurhö** nunatak a 120-180 ft wide layer of sediments was completely contact-metamorphosed by the intruding dolerite. In many places basaltic dykes cut through the complete sequence. Unfortunately no fossils could be found and the stratigraphic position of the sediments remains uncertain. About 550 lbs. of rock specimens were collected and stacked at depots where they were to be collected by the mechanized support party.

On the 6th of December we arrived at **Pyramiden,** where our support party had laid a depot of petrol, paraffin and food for the 1966-expedition. This nunatak, consisting of slightly metamorphosed sediments, attains a height of 4,560 ft above sea level. It had been the advance base of the Norwegian-British-Swedish Antarctic field expeditions (1949-52) (John Giaevers: *The White Desert*). The depot was found in good condition on the rocky northern flank of Pyramiden, round whose summit snow petrels were circling.

Left: **A view from** *Kjolrabbane* **peak towards SSE. In the background are the Borga mountains, 22 miles away.**

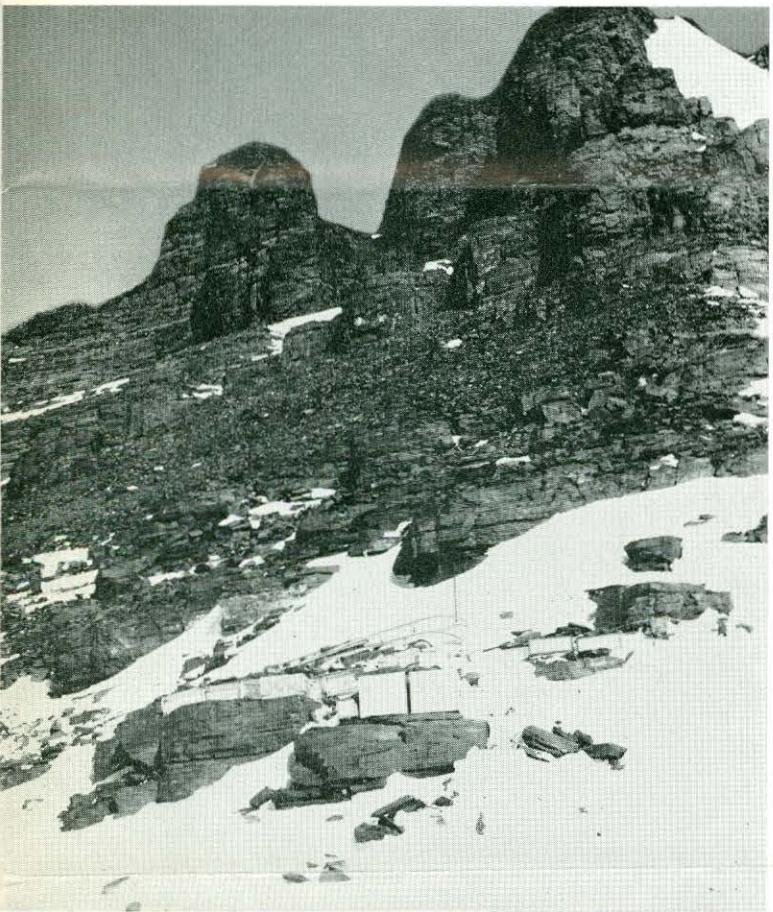
Right: **Sediments of the** *Kjolrabbane* **nunataks.**

Below: **At** *Pyramiden* **the historic base of the N.-B.-S. field expeditions of John Giaevers' expedition of 1949-52 was found in good condition.**

This was our most southern point, Zac established a geomagnetic station, and we moved eastward to investigate the area around **Kjolrabbane, Stammen** and **Ovenuten.**

We worked and travelled mostly during the "night", because catabatic winds between midnight and midday, especially in the northern part of the Ahlmannrygen, made travelling and field work very unpleasant at other times. We usually struck camp round about 10 a.m., travelled during the afternoon and worked in the late hours. During this time of the year the sun does not go down.

In the middle of December we turned our sled towards the base, reasonably satisfied with the geological and geomagnetic work done during the available time. We arrived at the base on the 22nd of December. Altogether we had done 440 miles in 74 days.



SANAE VIII

Spanlede

Leier	A. F. G. Rossouw
Werktuigkundige	C. A. v. B. Bezuidenhout
Geomagnetikus	G. C. Coetzee
Senior Werktuigkundige	W. Hodsdon
Geoloog	C. S. Kingsley
Landmeter	R. J. Kirkland
Geneesheer	Dr. M. Kruger
Fisioloog	J. M. Loots
Senior Weerkundige	F. A. J. Mocke
Radio Operateur	A. L. Nel
Ionosfeer	A. W. V. Poole
Geoloog	J. A. Retief
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Weerkundige	P. C. L. Steyn
Radio Tegnikus	R. B. J. van Heerden
Weerkundige	J. S. van Rhyn