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SPECIAL REPORT

BANAK AREA

SPECIAL REPORT

on the

BANAK AREA

Coast Report

LITLEKLUBBEN to BUSTAD

(see photograph attached to map 1)

References: - Admiralty Chart 2315, Norwegian Chart 99, G.S.G.S. 1/100,000 sheets U3, V3, V2.

Sector I

LITLEKLUBBEN to REVSNESET

This stretch of coast is about 8 miles long and is steep-to throughout except in the small inlets of Kvalvika, Teistbukta (Elvevika), and Bekkerbukta, in each of which the 3 fathom line is about 500 yards from the heads of the inlets. Two streams, the Falesloutelva and Guouddeelva discharge into Kvalvika and Teisbukta respectively. Both these streams run through short valleys: that running inland from Kvalvika is narrow with steep sides. There are no roads or tracks leading through either of these valleys. Sommervika, half way between Kvalvika and Teistbukta, lies at the seaward end of another short valley and is connected to Kokelv, at the head of Revsbotn, by a path following the telegraph line, via Revsneshamm and Danielsvika. Elsewhere this coast is high and steep, with mountainous and trackless country inland.

Revsneset is the southern entrance point to Revsbotn.

Sector II

REVSNESET to STORJORD (south-western side of Revsbotn)

The south-western side of Revsbotn is steep-to throughout; the coast is rocky,

and impracticable for landing purposes.

The land rises steeply from the shore, there being heights of over 300 feet about 500 yards inshore. The country is rocky and barren with patches of heather, moss and lichen. There is a small wharf in Revsnesham, but there are no reads or tracks leading inland.

Revsneshamm, Store Gatevika and Danielsvika are three small inlets in the north-western half of this coast. There are telegraph offices at Revsneshamm and Danielsvika connected to Sommervika, and Kokelv (see Sector I, above). The telegraph line follows the coast closely in most places. Timber for the telegraph poles was floated ashore at high water at Revsneshamm and Danielsvika from telegraph ships (about 500 tons). Sector III

STORJORD to KALVNESET (the head of Revsbotn)

The head of Revsbotn is about 2 miles long. Two rivers, Russelva and Kokelva, discharge into the head of the fjord: the mouth of the former is in the centre of this stretch and the Kokelva is about 1,200 yards south-westward of it. The shore, for the most part, is of firm sand, with shingle and weed, but immediately behind it there appears to be a sea-wall which extends from the mouth of the Kokelv to the eastern end of the beach: behind the north-eastern end of this sea-wall there is a raised sandy beach.

Landing beach

The best landing place is a stretch of beach extending from the mouth of Kokelva for about half a mile westward to the mouth of Masterelva. Here the charted below water gradient is about 1:40 to 1:20; 100 yards from the beach the depths increase rapidly but there is shallow water off the mouths of both rivers. Although a slight scramble might be necessary to obtain access inland, there is no sea-wall as an obstacle to movement from the beach.

The small village of Kokelv, with a telegraph office and boarding school, lies on both sides of the river mouth.

Exits

The cross-country route southward from this beach is described under "Routes from Revsbotn to Banak (iii)".

There is no evidence of a bridge over the Kokelva but a narrow gravel road leads eastward from the east bank of the river and, on reaching the Russelva turns in a south-easterly direction and leads up the Russavuovdde valley between the left bank of this river and the foot of Russavarre, 1,017 feet high. After 3 miles the road crosses the Russelva by a bridge and follows the right bank of the river for a further $3\frac{1}{2}$ miles where it re-crosses the river at Russeidet. From Russeidet the road continues in a south-easterly direction for 7 miles to the head of Olderfjorden, where it joins the North Trunk Road and follows the western shore of Porsangen, via Kistrand, to Banak.

The country through which this road passes is generally bare and affords very little cover.

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Sector IV

KALVNESET to SOGNESET (north-eastern side of Revsbotn)

There are three inlets on this stretch of coast, Litlefjorden, Slatten, and Sauhamn. Shoal water extends for about 600 yards from the head of Slatten, but the other two are fairly steep-to except for a short distance from their heads. In Litlefjorden the small island of Grasholm is connected by a narrow spit to the southern side of the fjord; there is a depth of 6 feet over the north-western end of this spit. The remainder of this coast is steep-to and off-lying dangers are few. The shore, except at the head of Slatten, is rocky and steep, and the countryside is typical of the locality, being barren rock with patches of heather and moss.

Slatten is the only possible landing place. There are a few buildings, including a chapel, at its head, and a broad valley connects it with the head of

Snefjorden, 3 miles to the north-eastward.

The shore probably consists of rock and stones, but is suitable in places for landing from small boats. The best part upon which to land is the north-western side where the charted below water gradient varies from 1:40 to 1:50. The small inlets of Leirvika and Rottvika, on the south-eastern side of Slatten, dry out at low water.

Exits

There are no road exits but the telegraph line which connects Eiterfjorden (70° 58' N., 24° 41' E.) with Kokelv passes close to the head of Slatten and alongside it there is an old reindeer or footpath.

SOGNESET to BUSTAD

This stretch of coast is 31 miles long: it is rocky and fairly steep, and is exposed to north-westerly and westerly winds. It is unsuitable for landing operations and there are no exits.

Anchorages

The only reliable anchorage in Revsbotn is in Litlefjorden, south-east of Latteren farms, in about 9 fathoms, good holding ground.

Other anchorages in the fjord are as follows:-

Revneshamn (see page 1). A port of call for local steamers.

Anchorage in 9 to 16 fathoms, good holding ground. Selkop (at the head of the fjord, $1\frac{1}{2}$ miles north-east of Kokelv).

Ships can anchor off here in from 3 to 5 fathoms, but it is exposed to north-westerly winds.

Revsbotn is reported to be usually free from ice all the year round: if, however, any should form around the head of the fjord it should not be of sufficient thickness to prevent landing from small craft.

ROUTES FROM REVSBOTN TO BANAK

Map references are to Map 1 and G.S.G.S. 4090, Sheets V3 and V4.

From Revsbotn to Repparfjord - Olderfjord road

The first bound of an advance southward from Revsbotn is to the Repparfjord -Olderfjord section of the North Trunk Road:

(i) Road

From Kokelv at the head of Revsbotn (see photograph on map 1), a narrow, gravel road runs south-eastward along the valleys of the Russelv and the Smorfjordelv to the head of Smorfjord and thence south-ward to join the North Trunk Road at Older-

fjord (see mosaic 3).

Note. This road is shown on G.S.G.S. 4090, Sheet V3, but two corrections should be made: it is reported that the road crosses to the right bank of the Russelv at about 774512 and recrosses at about 816471; there is certainly an alternative branch road from about 842440 along the upper valley of the Smorfjordelv to join the North Trunk Road at about 810386 (these corrections are shown on map 1).

Distance to the North Trunk Road by either main or branch road is about 16 miles.

(ii) Cross country route (marked in green on map 1) The following route appears to be reasonably good:

From Kokelv village at the head of Revsbotn, southward along the Kokelv valley almost to the sources of the river, across a col between the hills marked by spot heights 433 (V3, 714388) on the west, and 380 (V3, 735394), on the east, and thence down easy slopes to the North Trunk Road (mosaic 2). Distance about 16 miles.

Bound 2

From the Repparfjord - Olderfjord road to Banak

The North Trunk Road runs eastward from Repparfjord to Olderfjord and Kistrand (photograph 1), then southward along the western shore of Porsangen to Banak (for full description see Route 33 in Part III of C.B. 4096 Q, Vol. II; note that the old ferry (photograph 2) over the Lakselv is now definitely replaced by a bridge).

Distance from Olderfjord to Banak is about 42 miles. (ii) Cross country route (marked in green on map 1)

A journey across country from the Repparfjord - Olderfjord road, south-eastward to Banak would encounter many difficulties: there are no tracks, the area is a maze of small hills with lakes and marsh in the hollows, and the grain of the country is north-east to south-west. A feasible route, however, is indicated on map 1. It follows the Skaidelv to the western side of Skaidevath (lake). From there the stream flowing into the south-western corner of Skaidevata is followed to the confluence of streams (V4, 734110) just west of a small lake. The route then leaves the stream and runs a little east of south to pass between two small lakes. An advance of a little less than 2 miles from this point leads to a stream running east-south-east, through a narrow, scantily wooded valley. The stream is followed to its confluence (V4, 784028) with a stream flowing from the south-west. From this confluence, an advance of about a quarter of a mile due south leads to a track eastward through scanty woods to join the North Trunk Road about a mile south of the bridge over the Stabburselv. The North Trunk Road is then followed to Banak.

This section of the North Trunk Road is, however, a defile between the fjord to the east and steep scarps to the west. A possible alternative route avoiding the defile has been indicated on map 1. It branches southward from the track mentioned above, to climb along the Nasteelv stream to the depression containing a small lake called Nastevatn. A further advance of about 1 miles south-eastward leads to a smaller lake (V4, 854955) whence there appears to be a practicable way down the scarp by following the stream flowing from the lake south-eastward through a deep ravine. This leads directly to the main road bridge over the Lakselv, near

Skallenes (photograph 2).

The cross country route from Revsbotn, suggested above, would be fairly easy to traverse by properly equipped men in the winter months when the streams, lakes and marshes are frozen; going is especially easy at night. The routes are not, however, easy to find. The directions given above proceed on the assumption that the map is correct in detail, which may not be the case. A local guide is recommended.

ESCAPE ROUTES from BANAK to the SWEDISH FRONTIER

Unless a very wide detour is made, an escape route from Banak into Sweden must pass through Finland, thus involving the crossing of two frontiers: the Norwegian -Finnish and the Finno - Swedish. The shortest route runs south-westward from Banak to near Kautokeino and thence across the narrow strip of Finland known as the Finnish Wedge, and so across the frontier river Muonio jokka to enter Sweden at Karesuando (see map 3). This suggested route is described below in detail. The distance to be covered is over 200 miles.

It is assumed that the journey is to be made during the winter months. The terrain crossed is invariably badly drained and is a maze of rivers, lakes, and marshes; although these are serious obstacles in summer, they are frozen and covered with snow during the winter months and often provide routes superior to overland roads and tracks. The "winter roads" mentioned in this report are sledge tracks used by the Lapps and usually follow the main water courses, diverging overland only to avoid the wider meanderings of the rivers. The main winter roads and cross country tracks are usually marked by bushes and sticks, and there are mountain huts ("fjellstuer") or telegraph huts ("telegrafstuer") at intervals of about 20 miles.

The suggested route is described in detail between the following bounds:

1. Banak to Skoganvarre.

2. Skoganvarre to Karasjok.

3. Karasjok to Miron.

4. Miron to Swedish frontier. Map references

G.S.G.S. 4090, Norway 1:100,000, sheets, V4, V5, W5, U6, V6, W6, T7, U7, T8,

G.S.G.S. 4093, sheets A2 south, A3 south, B2 north, B3 north.

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Banak to Skoganvarre (Sheets V4, V5)

It is suggested that the first bound should be the telegraph line which runs westward from Skoganvarre (V5, 955686). The easiest and quickest way is by the road (described in C.B. 4096 Q. Vol. II., Part III, Route 42. See also paragraph 4). If the road is to be avoided the best alternative is along the wooded depression which runs north and south at the foot of the steep scarp forming the western boundary of the Lakselv valley (photograph 3). Men equipped with skis, however, would probably make the best time by following the lakes of Nedrevatn (photograph 5) and Ovrevatn (photograph 6). The high hills on the east of the road are not recommended; this route would be long owing to many undulations, and there would be danger of getting lost and wandering too far to the east.

The hills to the west of the depression are rough and dangerous, therefore the route must follow the depression of the Lakselv. Distance by road is about

At Skoganvarre (photograph 6) there is a tourist station with 30 beds and a shop owned by Henry Opdal. There is a post office with telephone, therefore the settlement itself had best be avoided.

Skoganvarre to Karasjok (Sheets V5, W5, W6)

The second bound should be the Karasjokka river at, or west of, Karasjok village, There is a good road from Skoganvarre to Karasjok (C.B. 4096 Q. Vol.II, Part III, Route 42. See also photograph 7). If the telegraph line is reached west of Skoganvarre it can be followed eastwards to the road.

A good alternative to the main road is provided by a winter road which can easily be reached by following the line across the main road. After about 13 miles there is a junction of lines (V5, 008650); those branching south-east along a cart road are to Holmen on the Tana river. Follow the wires running due south; they lead shortly into the winter road, which then branches left from the line of the wires and follows Skrennedalen to Natvand (lake). (If the wires are followed all the way they lead back to the main road.) The winter road crosses Natvand lake and rejoins the main road about 5 miles north of Karasjok (junction is at W6, 125354). The main road can still be avoided by crossing it and advancing westward for about a mile to the small lake of Antikjern, then following the stream (Ravddajokka) which flows south from it to the Karasjokka river.

There is a bridge over the Karasjokka river at Karasjok. (See photographs 8

and 9) which were taken before the bridge was built.)

Distance by road is about 30 miles.

Bound 3

Karasjok to Miron (Sheets W6, V6, U6, U7)

There is no motor road on this long stretch, but there is a good winter road throughout. It runs westward from Karasjok, sometimes along the Karasjokka river, sometimes to the south of it, to the confluence of the Karasjokka and the Jiesjokka (V6, 028238). There is also a footpath along the northern bank of the Karasjokka to the confluence of the rivers.

From the confluence, the route follows the Karasjokka southwards to Beskergarg (V6, 022189), then turns west through undulating, wooded country to the Jiesjokka at V6, 828147. The winter road then continues along the south bank of the river to Suosjavre mountain hut (V6, 676148). Just north of the hut, on the Vuoddasjokka river, there is a junction of winter roads. The route running westward along the river should be followed (that branching north-west is to Alta).

The winter road continues westward along the north bank of the Vuoddasjokka river then turns south-westward along a chain of ribbon lakes (see Sheets U6, U7) to Lappoluobbal mountain hut (U7, 490950). Here the route leaves the winter road and branches south-west along a track leading to the Kautokeino river (U7, 412916), which in this area consists of a series of ribbon lakes followed by a winter road

south-westward to Miren (U7, 300839). At Miron a main road from Alta runs along the west bank of the river.

Distance about 80 miles.

Bound 4

Miron to Swedish frontier (Sheets U7, T7, T8, U8)

From Miron there are three alternative ways across the frontiers. The Norwegian - Finnish frontier is not a natural boundary and there will probably be no clear indication of when it is crossed: the Finns - Swedish frontier, however, is the considerable stream of the Muonio river, running north-west to south-east athwart the routes. This river must be crossed before neutral territory is reached.

(i) This is the shortest route as it crosses the Finnish Wedge at its narrowest part.

The first bound is the straggling village of Kautokeino, about 9 miles southwest of Miron. The winter road from Miron offers a direct route along the Kautokeino river. A new motor road is being built from Miron to Kautokeino, following the line of the telegraph wires; the first 5 miles southward from Miron have been completed and though it is reported that the work has been temporarily abandoned owing to shortage of labour, the rest of the route has been marked out.

From Kautokeino a good track continues along the left bank of the Kautokeino river, crosses it to Galanito farm (T8, 153594) then continues in a general southerly direction through wooded, undulating, lake-strewn country to cross the Finnish

frontier at T8, 096370.

From the Finnish frontier an indistinct path continues southward through wooded country, past Syvajarvi farm on a lake of that name, to the frontier at Karesuando. A bridge over the river leads to the Swedish village of Karesuando.

Distance about 50 miles.

Note. A new road is being constructed, under German supervision, from Karesuando, north-westward along the Finnish side of the Muonio river to Skibotn in

(ii) A good alternative route which has the advantage of avoiding Kautokeino village. It follows the winter road from Miron to about half way along the Njalla javrre Lake, then branches (U7, 282780) southward along a track which is also followed by a winter road. It skirts the western side of Vuoras javrre Lake. follows a line of small ribbon lakes to the Oskaljokka at T8, 293522, then follows the tributary of the Oskaljokka which leads east-south-east then south to strike the Finnish frontier at the southern end of Goedge jevarre Lake.

The track continues along river valleys, past the small village of Suonttajärvi to the Enontekio - Palojoensuu road. Palojoensuu is on the Finnish side of the

Muonio river which must then be crossed into Sweden. Distance about 60 miles.

Note. Routes (i) and (ii) are joined by several tracks running eastward from Kautokeino and also by a winter road which starts at the confluence of the Kautokeino and Suopat rivers (T8, 220684) and follows the Suopat river to join route (ii) at Oskal (T8, 283526).

(iii) This follows route (ii) above to a point about 2 miles east of Oskal; here route (ii) turns south along the river and route (iii) continues south-east over Suolo javrre Lake to strike the Finnish frontier about 7 miles east of route (ii).

The track continues over the Finnish frontier, through Näkkälä to the village of Enontekio, whence there is a motor road to Palojoensuu on the Finnish side of the Muonio river.

Distance about 70 miles.

Suggested parachute landing areas within 30 miles of Banak

(Maps 1 and 2, photographs 3-6 and 10)

Map references are to G.S.G.S. 4090, Sheets V4, V5, W4, W5

General topography

Since the topography of the country within the quadrant north-west of Banak has been described in map 1, the following brief statement will be confined to the quadrants north-east, south-east and south-west of Banak.

Within this district there are two lowland areas. One extends south from Banak to Karasjok near the Tana River. Between Banak and Skoganvarre, on Ovrevatn, the lowland is between six and seven miles wide and about fifteen miles long. In this section it is confined between steep scarps on the east and the west. South of Skoganvarre it widens out and merges with the lowlands of the Tana River. This Lakselva Lowland is followed by the Banak - Karasjok road. The other lowland area 18 that of the lower Borselv River which is followed by the North Trunk Road east from Porsangen. These two lowland areas are separated by an area of highland which extends along the eastern shore of Porsangen for a distance of about ten miles.

The highlands, which occupy the area other than the two lowlands mentioned above, are similar to those described in more detail in relation to the north-west quadrant (see map 1). In general, they are rolling and hilly, studded with numerous lakes, and covered with a mat of grasses, lichens, and low growing arctic scrub. The lowlands, on the other hand, are largely covered with a relatively dense northern birch woodland. The Borselv lowland is more lightly wooded than the Lakselv lowland.

Nine possible parachute landing areas are described below:-

(1) Skaidevatn Upland (V4, 740130, elevation 1,150 feet)

The Skaidevatn site is located about a mile south of the west end of Skaidevatn Lake, about ten miles west of Porsangen and about seventeen miles north-north-west of Banak. Skaidevatn is the largest of several lakes on this part of the upland and is about three miles long, from east to west, by an average width of three-quarters of a mile. There are few landmarks or obstacles to low flying in the area, the highest point in the vicinity being a rounded summit about two and a half miles south-south-east of the site, which rises to 1,730 feet (527 metres).

The parachute landing site itself consists of a core area of about one square mile of nearly level land which is apparently entirely free of any but very minor obstacles to landings. This area slopes gently to the west and is bounded on that side by a north flowing stream which enters the south-west end of Skaidevatn. West of this stream is a large expanse of marsh which would be frozen and snow-covered in winter. South of the core area is a long narrow lake beyond which the land rises gradually to a ridge some two miles south of the landing site. East of the core area the land is more rolling in character and somewhat higher. Between the core area and Skaidevatn to the north, the land is gently rolling. A small round lake lies in this area just south of the main lake. The area is covered by the typical upland vegetation of grass, low scrub and small stunted trees where the bedrock itself is not exposed.

One exit from the landing area is due east five miles across a rolling treeless upland to the edge of a low escarpment which drops to a forested lowland. A track extends for some four or five miles through this lowland to the North Trunk Road on the west shore of Porsangen. These woods, encountered five miles east of the landing area, constitute the nearest cover.

There is another exit, southward, described under "Routes from Revsbotn to

Banak, Bound 2."

(2) Stabbur Lowland (V4, 840040, elevation 250 feet)

The Stabbur site is located just south of the Stabburselv (river) and about one and a half miles west of Porsangen. This is roughly in the centre of the triangle-shaped Stabbur lowland which is bounded by a steep escarpment on the north-west, a somewhat more gradual scarp on the south, and Porsangen on the east. The north-western scarp rises in places as much as 800 feet in a distance of half a mile.

The core area is about one square mile of nearly level land and is bounded on the north by the steep embankment which drops about two hundred feet to the south bank of the Stabburselv. The area is not entirely clear of trees but seems to be the most thinly forested portion of the lowland except for the point which extends into the fjord near the mouth of the river. West of the core area the land slopes very gently to the river which here flows north. The density of the woods increases toward the west and some small marshy areas are encountered. To the south between the core area and the base of the southern scarp the land is more hilly. East of the landing site the land slopes gradually to the North Trunk Road and the fjord through an area of woods and small swamps.

Thin forest cover is easily accessible immediately adjacent to the landing area on the west, south and east. A track leads directly across the site and joins the

North Trunk Road about one mile to the east.

(3) Banak Lowland (V4, 890940, elevation near sea level)

Site of the Banak airfield.

(4) Vuoddo jokka Upland (V5, 855855, elevation 1,175 feet)

This site is located about 5 miles south-south-west of Banak on the edge of the upland just west of the Lakselva Escarpment. It lies south-east of the southern end of Vuoddoj Lake, the largest in this part of the highland. About two miles south-west of the landing area is a ridge (Divggagaissa) which rises to heights of about 2,500 feet at its northern end. Some four miles north-west of the area an extension of the same ridge rises to about 2,100 feet. About one and a quarter miles north-north-east is a hill which rises abruptly to 1,500 feet.

The landing site occupies a relatively level rectangular area with a north-west - south-east dimension of about one and a half miles, and a north-east - south-west dimension of about three-quarters of a mile. West of the site, the land drops slightly to the valley of the Vuoddojokka which in this locality is rather broad and open. About one mile south of the landing area the Vuoddojokka is entrenched in a deep, steep-sided gorge which cuts through the scarp to the low-lands of Lakselva. North-eastward and south-eastward from the landing site, a line of hills is found along and parallel to the top of the scarp. Due east of the southern end of the landing area, however, is a gap which provides access to the easiest descent of the scarp. A track leads down the face of the scarp at this point to the Lakselv lowlands. The upland in which the landing site is located is covered, except where bare rock is exposed, only with grass and low arctic scrub.

(5) Levnaselva Upland (V5, 850650, elevation 1,500 feet)

This site is located 62 miles west-south-west of the town of Skoganvarre and lies just east-north-east of the Guovzzoalj Lake. The principal landmark, as well as the chief obstruction to low flying, is the peak of Vuollanjunne which rises to an elevation of approximately 2,750 feet within three-quarters of a mile of the northern edge of the landing area.

The landing area is roughly oval in shape with dimensions of one and a half miles from east to west, and one mile from north to south. The landing area itself is relatively level and studded with numerous shallow tarns or ponds which presumably would be frozen and covered with snow in the winter. The site is bounded on the west by Guovzzoalj Lake. West of the lake a large marshy area occupies the flat portion of the Levnaselv Valley. To the north, the peak of Vuollanjunne rises very steeply from the edge of the flat ground. On the east and south the land falls away much more gradually into the valley of the lower Levnaselv. The vegetation consists of only the normal highland grasses and low scrub.

This landing site is crossed from west to east by both a track and a telegraph line which lead gradually down to and across the Vuollaelv and around the southern end of Ovrevatn to Skoganvarre on the Karasjok - Banak road. The first cover encountered on this track is the forest in the valley of the Vuollaelva.

(6) Skuvvanvarre Upland (V5, 960650, elevation 1,000 feet)

This site is located two miles south of the town of Skoganvarre which is situated on the eastern shores of Övrevatn. There are no obstacles to low flying as there are no higher elevations in the immediate vicinity of the landing site.

The core area consists of a tract of rolling upland with a maximum dimension of about one mile from north-west to south-east, and a north-east to south-west dimension of about three-quarters of a mile. This core area is relatively level in the centre and more rolling towards the edges. To the north, north-east and east, the upland drops off rather steeply to the valley south-east of Skoganvarre. The main Karasjok - Banak road which follows this valley is about two miles from the core area in any of these directions, but the more gradual slopes, as well as a track, lead, in general, northward directly towards the town. The easiest gradient is that leading north-north-eastward from the centre of the landing area. West of the landing area the land drops steeply into a deep, steep-sided valley. To the south is an extensive rolling upland at slightly lower elevations than the landing area itself. In the centre of this shallow basin is Savnjavatn, the largest upland lake in this district. East of the northern end of the lake, and about two miles south of the landing area is about one square mile of relatively level marshy ground which would be frozen and snow covered in winter.

The landing area itself is covered only with the usual upland grass and low scrub, where bare rock is not exposed, and the lower slopes are lightly wooded.

Better cover would probably be offered by heavier woods in the valley bottom near

Skoganvarre.

(7) Luovosvarre Upland (W5, 01,0620, elevation 1,000 feet)

This site is located about a mile north-east of the Karasjok - Banak road some five miles south-east of Skoganvarre. The centre of the landing area is about one mile due north of the small lake known as Lavkkavath which lies just south of the road. There are no obstacles to low flying in the vicinity.

The actual landing site is a nearly level tract about $1\frac{1}{2}$ miles long in an east - west direction, and about half a mile wide. The land slopes gradually down on the north, west and south; more broken, hilly country lies to the east. Of the landing area itself, the western end is clear of any but low growing vegetation,

but the eastern end is covered with thin woods.

The western end of the landing area is crossed from north-north-west to south-south-east by a track which joins the road about one mile north-north-west of the landing area and about half a mile south of it. A telegraph line also crosses the centre of the landing area from a point on the road about half a mile south of the area to its junction with the road about four miles to the north-north-west. Some cover would be afforded by woods along the river about one mile north-west of the west end of the landing area.

(8) Peisjavrre Upland (W4, 145940, elevation 1,550 feet)

This site is located 16 miles due east of Banak in a shallow basin two miles west of the Borselv River. The landing area is just north-east of Peisjavrre Lake. The only major obstacle to low flying in the vicinity is the summit of Vobmuaivve which rises to an elevation of 2,350 feet one and a half miles south of the site.

The landing area itself is about one and a quarter miles from north to south, and about three-quarters of a mile from east to west. The surface is relatively level, but slopes gently towards the north-east. This area is part of a broad corridor running through the upland area from the Luostejokka on the south-west to Borselven on the north-east. North-east of the landing area this corridor is a

relatively flat floored valley; south-west of the site it becomes narrower and more uneven, and contains several lakes. North-west and south-east of the landing area is rolling upland country. The western half of the landing area is marshy, but this would be frozen and snow covered in the winter.

The landing area supports only a low upland vegetation of grass and low scrub, and there is no forest cover for over ten miles by track. A track crosses the landing area and follows the corridor south-west about four miles to the Luostejokka. Here it turns north-west and follows the valley of the Luostejokka and Caskeljokka for about seven miles to the North Trunk Road which it joins some six miles east of Banak.

(9) Borselven Upland (W4, 190220, elevation 775 feet)

This site is located seven miles east of the mouth of the Borselv River, and about one and a half miles north-east of Fjeldenden which rises to a height of 1,950 feet.

The landing area is roughly circular in shape with a diameter of about one and a half miles. The surface is undulating or gently rolling. It is limited on the south-west by the rather steep edge of the higher plateau, but on the north and east the land drops very gradually down to Borselven. The landing area itself supports only grass and low scrub where there is any soil cover.

Some forest cover is available along the river just east of the landing area. Both a telegraph line and a track cross the site and lead in almost a straight line west-north-west to the North Trunk Road near the mouth of Borselven. This track is some six miles long. The eastern half crosses barren land while the western half passes through wooded country.

Appendix 1

SNEFJORDEN

(1) Coast Report

Reference: Admiralty Chart 2315, Norwegian Chart 99.

G.S.G.S. 4090, Sheets V2, V3.

Note: The only photograph (aerial or ground) available of the area covered by this appendix is that attached to Map 1.

General

Snef jorden (70°52' N., 24°28' E.), northward of Revsbotn, is about 5 miles long and from 3 to 2 miles wide, and is entered between 0stre Bustadneset and Avloysingneset, about 4 miles eastward.

The ground on both sides of the fjord rises fairly steeply from the shore with undulating heather moors in the interior, where there is a little cultivated land

and a few widely scattered small farms.

In the vicinity of Lökstrand, at the head of the fjord, there is some cultivated land with a few small habitations, occupied by about 200 Norwegians and Sea Lapps, and a school. Close south-westward of Lökstrand, a small stream enters the fjord from Laksevand, a mountain lake about 4½ miles to the south-eastward. The bed of the stream lies in a ravine and attains a height of about 300 feet above sea level, some 3 miles inland. Another area of low ground lies south-south-westward of the mouth of the stream and extends towards Slatten, on the north side of Revsbotn.

Night landing is stated to be easy at any of the landing places in the fjord (described below) and, except at Lökstrand, would probably be unobserved.

The local inhabitants are reported to be strongly anti-German and the store-keeper at Bustadhamn, $2\frac{1}{2}$ miles north-westward of Kvitnesvagen, is stated to be a most reliable and helpful man.

Anchorage

There is good anchorage off Skavika, on the western side of the head of the fjord. The depths are from $5\frac{1}{2}$ to 11 fathoms, mud bottom and good holding ground. Coasting steamers normally anchor here. Tides and tidal streams

Tides : Spring rise is about 9 feet.

Tidal streams: The tidal streams in the fjord are not appreciable: the outgoing stream is always the stronger, especially in spring.

Ice

The fjord is always free from ice.

Landing places

West side of fjord

From Kvitnesvagen, three miles south-eastward of Bustadneset, to Skavikneset, near the head of the fjord, the coast is steep-to with a flat and stony foreshore; sandy beaches are to be found at the head of most of the small bays. Landing is possible anywhere along this stretch of coast and, where the shore consists of rocks only, there is always a depth alongside of at least 6 feet of water. Between Kvitnesvagen and Lökstrand, which are connected by telephone, a path runs along the coast within a few yards of the shore, except at a few headlands. A cart track leads north-west from Kvitnesvagen to Bustadhamn, where there is a small quay.

Wharves: At Kvitnesvagen; a wooden wharf about 65 feet in length and 5 feet high above high water. Depth alongside about 12 feet at low water. Near the wharf there are some medium-sized store-houses, a school, and about a dozen small cottages. There is a telephone line to Lökstrand.

At Fartoyvika; in the inlet about half a mile southward of Kvitnesvagen, there is a small wooden wharf with a depth of 6 feet alongside at low water. There are about 6 cottages here.

Apart from the wharves, the best landing places on this side of the fjord are between Kvitnesvagen and Amundvika, about a mile south-eastward; between these two places the coast is everywhere suitable for landing. With a north-easterly wind, however, landing on this side of the fjord is not recommended.

Head of the fjord

Between the point 500 yards south-east of Skavikneset and Lökstrand there are several wharves with a depth alongside of 7 to 8 feet at low water. They are normally used by fishing boats of about 40 to 50 feet in length. Between the wharves the beach is sandy, with a shallow approach. Landing from small boats is possible anywhere in this sector except in the river mouth, which is shallow and inaccessible.

Wharf: In addition to those mentioned above, there is a large wharf at Lokstrand, on the north side of the mouth of the river. The wharf is about 60 feet long, 5 feet high above high water, and has a depth alongside of about 15 feet at low water. It is reported to be used by the local steamer about twice a week.

In bad weather landing can best be effected at or between the wharves in the vicinity of Skavika.

East side of the fjord

This stretch of coast, from Lokstrand to Petterneset, two miles to the northward, is mostly steep-to, and landing from a small boat is possible anywhere. The beach, generally, is flat with occasional rocks and the approach is clear of underwater obstructions. Inland the ground rises less steeply than on the western side of the fjord and a path connecting Lokstrand and Petterneset runs within a few yards of the beach, except at a few headlands.

Wharves: At Krokelv, about a mile and a quarter northward of Lokstrand, there is a small wharf used by fishing boats of about 30 feet in length; the depth alongside is about 6 feet at low water. At Petterneset there is a small wharf similar to that at Krokelv. At Valen, on the northern side of the isthmus joining Goeskela with the mainland, three-quarters of a mile north-west of Petterneset, there is a small wharf or landing stage; no details of this are available.

Apart from the wharves, good landing is obtainable at any point on this side of the fjord between Palbukta and Petterneset, 13 miles to the north. The beach consists mainly of small stones with a foreshore of pebbles. It is reported that westerly winds do not impede boat-landing but with north-westerly winds landing is most easily effected in the bay eastward of Petterneset.

(2) Routes from Snefjorden to Kokelv (Revsbotn)

Paths lead along both the eastern and western sides of Snefjorden connecting the landing places, described in (1) above, with Lokstrand at the head of the fjord. Except for a few places where they cut across the bases of minor promontories, they follow the shore closely. Both paths are followed by telegraph or telephone lines. Near Lokstrand each path widens out into a cart track. There are few obstacles to travel by foot along either shore of Snefjord.

The best routes from Lokstrand to the head of Revsbotn pass through Litlefjord, on the north-east side of Revsbotn; these routes are described in two bounds, as

follows:-

(a) Lökstrand to Litlefjord

There are two possible routes between Lökstrand and Litlefjord: (i) following the telegraph line via Slatten and the coast of Revsbotn, and (ii) striking directly overland.

(i) The telegraph line between these two points is 8.4 miles long. It crosses the peninsula between Lokstrand and Slatten through a low depression which provides easy gradients across the highland. From Slatten to Litlefjord the line follows the north-eastern coast of Revsbotn and for most of this distance it follows the strand between the fjord and the highlands. Foot travel parallel to this line is easy for the entire distance.

(ii) This route strikes directly south-south-east from Lokstrand, across the high country, in a straight line for about 6.5 miles to Litlefjord. The area crossed by this route consists of broad, nearly flat upland approached at either edge by moderately steep, but smooth, slopes. There is no definite path or track, but foot travel is easy. The area is not wooded, but is

covered with heather, moss and lichens. (b) Litlefjord to Kokelv

From Litlefjord to Kokelv there are three possible routes: (i) along the telegraph line through the Ravddulelva junction (761553), (ii) along the highlands west of the telegraph line, and (iii) along the shore of Revsbotn.

(i) The telegraph line is 5.9 miles long between Litlefjord and Ravddulelven junction (where the lines to Kokelv and Olderfjord diverge) and three miles long from Ravddulelven junction to Kokelv. The line runs about

half a mile south-east up the river from Litlefjord then turns south-south-east up a moderately steep slope to the nearly level upland surface. It crosses this upland at an average height of about 1,000 feet and descends to Ravvdulelven junction across two steep scarps at 755570 and 760560. The latter of these two scarps might be difficult to descend although the line here has proven accessible to maintenance parties.

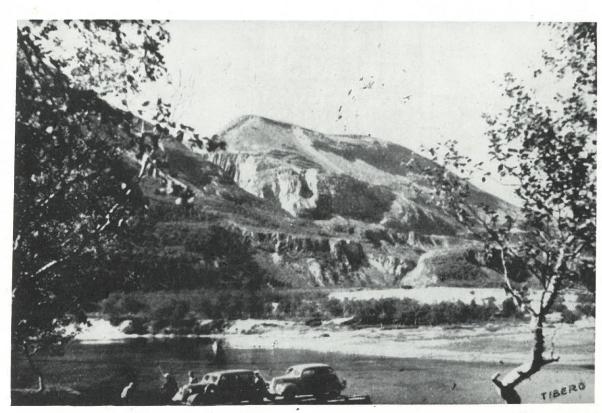
(ii) The more commonly used overland route between the two settlements strikes directly south from Litlefjord up a fairly steep slope on to the upland, which it crosses somewhat west of the telegraph line to the point 747570. From this point there is a relatively easy descent south-westward down the Birjaelva to the coast near Selkopp (740555). From here to Kokelv

the going is easy. (iii) It is also possible to follow the coast of Revsbotn on foot all the way from Litlefjord to Kokelv, though for much of this distance the path is confined to a narrow strand between very high steep cliffs and the shore of

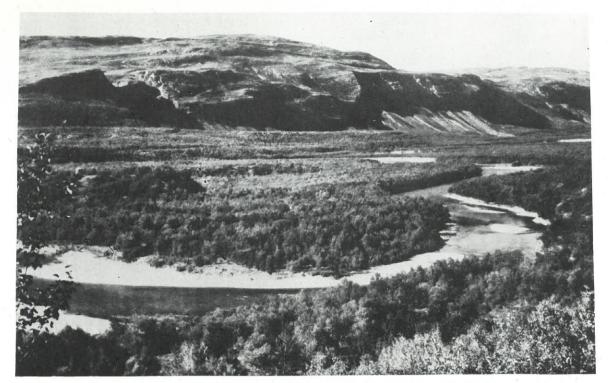
At Kokely all these routes connect with the routes (described on pages 2 and 3) to the Banak area.



1. Kistrand, on Porsangen. (W3, 953377) 119361 -



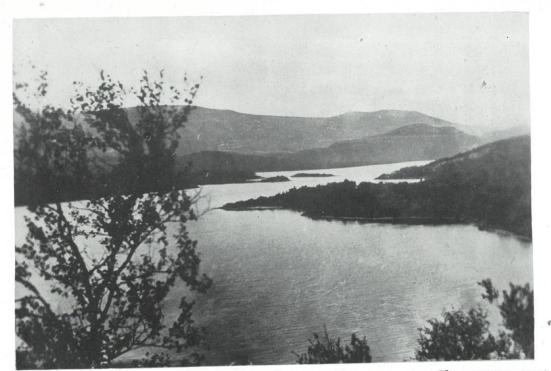
2. The Lakselv near Banak. (G.S.G.S. 4090, V4, 873936). The ferry is now replaced by a bridge. The gorge in centre background is suggested route of descent from the plateau. 20255 or 76554



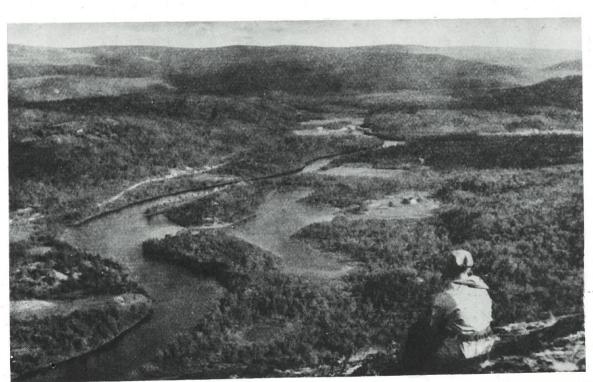
3. Lakselv Valley south of Banak. Note river meanders with sandy banks in a wide thickly wooded valley; scarped slopes to the west (in background) rising to the high fjeld. 94774



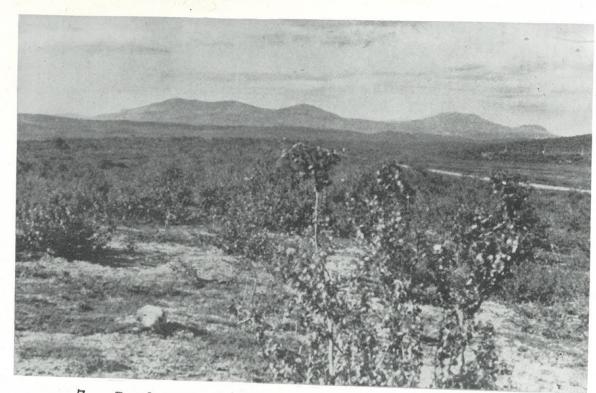
4. Karasjok road, looking northward towards Banak. 119358



5. The lower lake (Nedrevatn), on the way to Skoganvarre: probably looking south-eastward towards the southern end of the lake. 94776



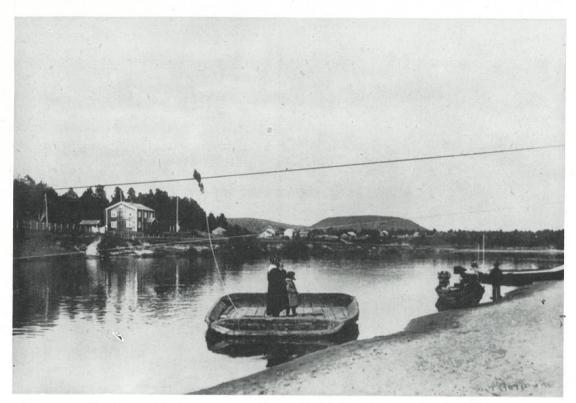
6. The upper lake (Övrevatn) and hamlet of Skoganvarre, probably looking south from Silbbacuoka. Well wooded with birch. Road from Banak in left centre. 94775



7. Road over the plateau to Karasjok. 119351



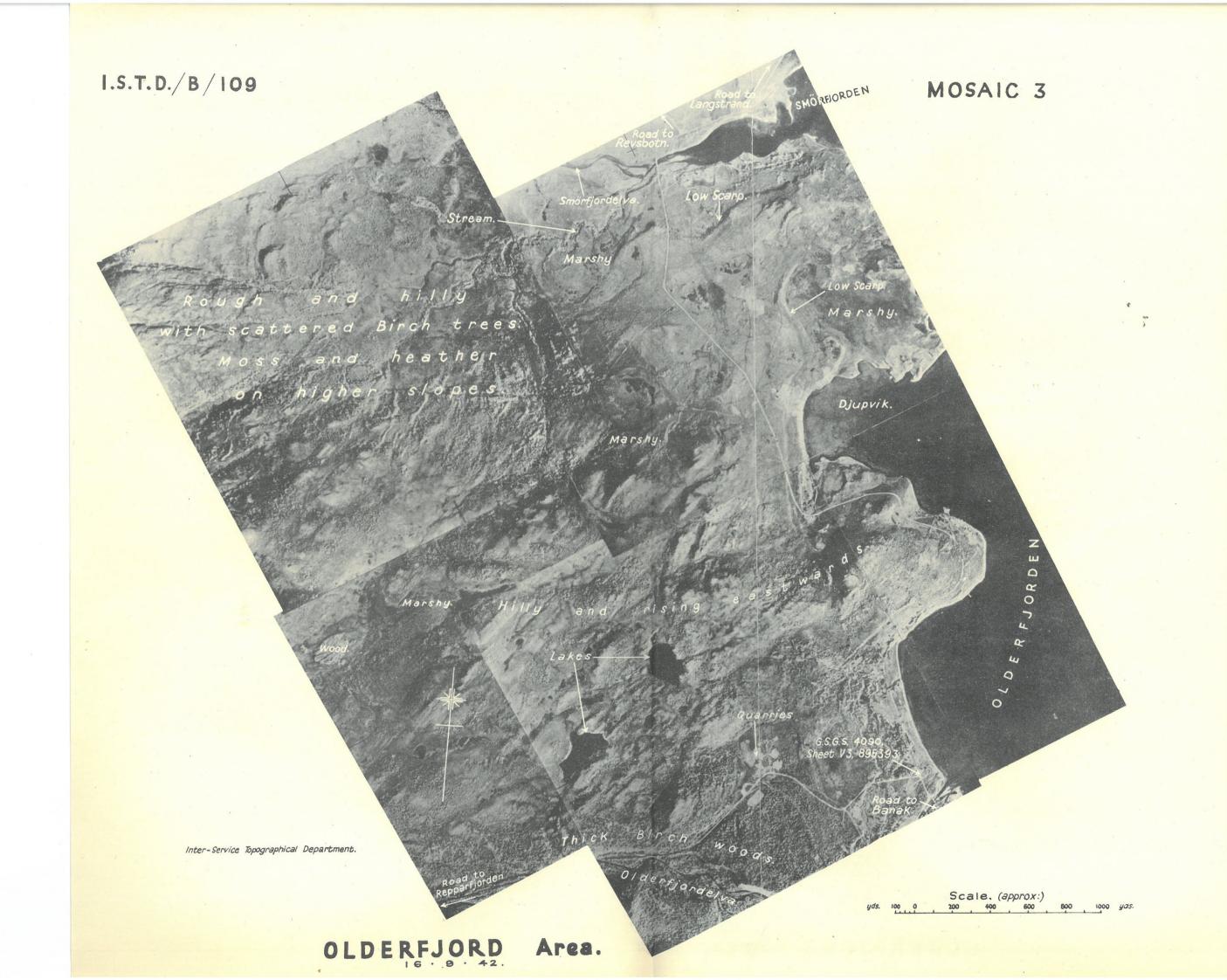
8. Karasjok. General view of the village, looking south. Situated on flat sandy terrain, on a bend of the river, surrounded by gently sloping valleys with coniferous and birch woods. There is now a bridge across the river. 20531

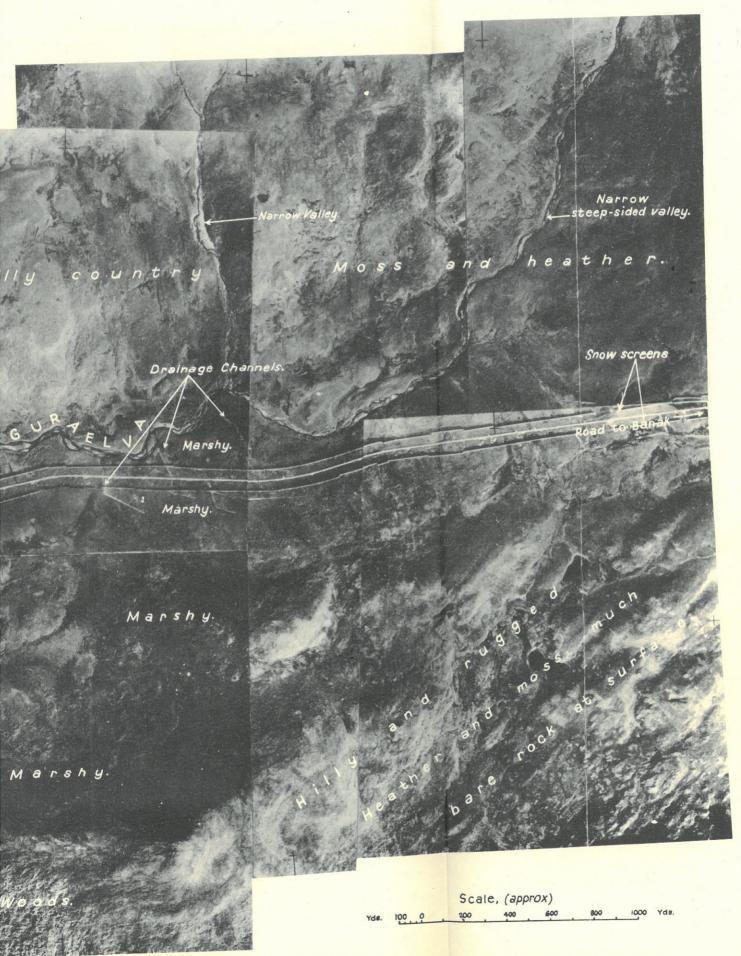


9. River Karasjokka at Karasjok. The ferry has now been replaced by a bridge. The tourist station is seen in left background. 100599 or/119363



10. The High Fjeld and Gaissa (mountain) country. This is actually in the Rastegaissa country about 20 miles northeast of the Lakselv - Karasjok road, but is typical of the plateau country on either side of the Skoganvarre - Karasjok road. 92749





Section of North Trunk Road.



partment

Upper REPPARFJORDDAL

16.9.42 scale (approx.) 1000 yds.

