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GEOGRAPHIC INTELLIGENCE REPORT

THE POLISH/RSFSR-LITHUANIAN SSR BORDER AREA

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MAP

USSR-POLAND: East Prussian-Lithuanian Border Area

THE POLISH/RSFSR-LITHUANIAN SSR BORDER AREA

I. Introduction

The area considered in this study extends for 20 miles on each side of the present Polish/RSFSR-Lithuanian SSR boundary line, which bisects former East Prussia at approximately 54°30'N. The northern edge of the border area extends from the Zalew Wislany (Frisches Haff)* on the Baltic Sea, paralleling the Pregl' (Pregel) River, and continues as far east as the Neman (Niemen) River. The area reaches south to a line between the towns of Elblag (Elbing), Giżycko (Lötzen), and Suwałki on the Soviet plain. (See the accompanying map, CIA 12698).

Terrain and settlement features are treated separately for each of four subregions: (1) the Coastal Plain, (2) the Interior Plain, (3) the Lake Plateau, and (4) the Lake Plain (see map). Other features are more uniform within the area and are considered on the basis of the border region as a whole.

Traversability is emphasized throughout the study. Eight corridors have been selected as offering the best possibilities for border crossings. Although all the routes have disadvantages, they are progressively better from the first, on the Baltic Sea, to the eighth, at the extreme eastern end of the boundary. These corridors may be studied in detail in conjunction with the accompanying 1:100,000 map series and with aerial photographs of the area. Their chief features are summarized as follows:

*The Polish or Soviet name is given first, followed by the old German name in parentheses.

1. The Mierzeja Wislana (Frische Nehrung). This sand bar provides a natural coastal route, with the shelving sand beaches on each side well suited to the landing of small boats. Offshore marshes and a narrow strip of forest on the land offer scant cover, however, and the beach can be easily blockaded at the borderline. In addition, ship channels at the ends of the sand bar form two more barriers that can be easily guarded. [redacted] 25X1C 25X1C [redacted] It would be possible to travel on foot over the ice in winter; in the warmer months, a crossing could be made by boat or by swimming [redacted] 25X1C

2. Braniewo-Kamiensko Forest - Zehlau Bruch. The Zehlau Bruch (Moor) and its adjoining forest forms the focal point of two routes through the Interior Plain and one route through the Lake Plateau. Scattered woods give cover south to the Kamiensko Forest, which extends for approximately 2.5 miles along the border and leads in a southwest direction to swamps south of Braniewo (Braunsberg). This route includes numerous settlements in which communications are well developed, and forest cover is spotty both north and south of the bor- [redacted] 25X1C 25X1C

3. Masurian Lakes - Nordenbork - Zehlau Bruch. Extensive swamp forests extend southeast of the Zehlau Bruch (Moor), crossing the border west of Nordenbork (Nordenburg), between the former German town of

Assaunen and the swamp area to the west of Nordenbork. The route continues south along the western edge of the Masurian Lakes in the Lake Plateau region. This corridor combines the advantages of a somewhat less populated and less developed area with covering forests that are separated only by small open fields, and is considered the best in the western section.

4. Angrapp Swamp Forest - Zehlau Bruch. A variation of the third route angles farther southeast into the Lake Plateau and crosses the border near the bend of the Angrapp (Angerapp) River, which encloses a large swamp forest just south of the border. The disadvantages of this corridor are that, like the other western routes, it includes considerable tracts of developed land and that it follows a somewhat indirect course in order to include a large swamp area near the border.

5. Puszcza Romincka Crossing. The Puszcza Romincka (Romintener Heide or Heath) contains the longest stretch of forest along the border; moreover, the terrain in the forest is hilly and the population is sparse. This would be an excellent border crossing area except that both north and south of the Puszcza Romincka is densely populated country practically without forest cover. Traveling across the area unnoticed would be difficult, if not impossible, especially to the north.

6. Lake Area at the Junction of Poland, RSFSR, and Lithuania. Between Lakes Vis[illegible]tis (Wystitter See) and Jez Wizajny, scattered swamp forests, marshes, and lakes extend on both sides of the border. The

terrain is hilly, but the sparse population is uniformly distributed, forest cover is not continuous, and the route parallels the Lithuanian SSR-RSFSR boundary line on the north, [redacted] 25X1C

25X1C

7. Sheshupe River Corridor. Farther east the Sheshupe (Scheschuppe) River forms a narrow marshy corridor from the broken country south of Jez Wizajny to the populated Lithuanian Plain. This route lacks trees, but there is a cover of bushes, and during the spring flood, when wire fences and other obstacles may be under water, boats might be used under cover of darkness or storm.

8. Suwałki-Nadlesn Pomorskie Forest - Neman (Niemen) River Route. The last, and best, corridor appears to be the Nadlesn Pomorskie forest area immediately north of the Marycha River. Although uninterrupted forest extends along the border line for only 3 miles, northeast of the Polish town of Zelwa, this is part of a broad belt of woodland traversing the country from west of Suwałki to well east of the Neman (Niemen) River. Besides giving excellent cover both on the ground and from the air, this forest is the least populated area along the entire border, and the population is clustered rather than scattered, making it easier to bypass settlements. The lakes, swamps, and loose sandy soils limit the use of vehicles except in winter and favor the foot traveler and guerrilla tactics at all seasons.

II. Terrain

A. General

Poor drainage characterizes much of the border area, and numerous lakes, marshes, and swampy woodlands of various sizes are found everywhere. These do not, however, constitute much of an obstacle to the roads, which are generally constructed on higher ground. Since surface water is abundant, the ground water is high and wells are moderately shallow. The once extensive pine and mixed forests are largely reduced to scattered remnants in the swampier sections and on the steeper slopes.

The landscape is typical of glacial plains, with little formidable upland. The lowlands are flat or gently rolling, and the uplands consist of smooth, elongated ridges and irregular hillocks (Figures 1 and 2). Relief is low along the seacoast and in the Interior Plain in the west; the highest elevations occur in the lake country along the stream divide in the east. In the extreme east the land slopes downward again toward the Neman (Niemen) River. Thus, the border comprises four successive belts of surface features, extending from the Baltic inland: the Coastal Plain, the Interior Plain, the Lake Plateau, and the Lake Plain. (See map CIA 12698.)

B. The Coastal Plain

1. Relief

The Zalew Wislany (Frisches Haff) is a coastal lagoon enclosed on the west by the Mierzeja Wislana (Frische Nehrung), a mile-

wide sand bar with rampartlike sand dunes rising as high as 100 feet and averaging 20 to 40 feet in elevation. The Mierzeja Wislana rises on the Baltic side from a smooth sand beach in a low foredune backed by high dunes, now stabilized by planted pines, with their steep slopes facing eastward toward the lagoon. Below the dunes the shore is shelving and somewhat marshy (Figures 3 and 4).

Around the northeast shore, river deposits have formed sand shoals and reed-covered mud flats. Marshy stream deposits of clay and sand also occur farther south at the mouths of the Pasłeka (Passarge) and Elblag (Elbing) Rivers. The eastern shore of the Zalew Wislany (Frisches Haff) is characterized by firm rock and a low coastal plain. North of the town of Mamonovo (Heiligenbeil), however, short steep embankments ring the shore. To the south, the hills of the Wyżyna Elblaska (Elbingerhöhen) rise abruptly from the coast.

2. Drainage

There are no extensive swamps on the Mierzeja Wislana (Frische Nehrung), but along the shore behind the low foredune is a discontinuous strip of swampy pine forest, and there are poorly drained hollows among the dunes. Despite the porous sand, drinking water can be obtained from shallow holes in these hollows or even from the Zalew Wislany (Frisches Haff), which owes its name to the reasonably fresh quality of the water. There are no lakes and practically no running streams, but a ship channel cuts through at Baltiysk (Pillau) (Figure 5). Another channel is under construction west of Elblag (Elbing), which will create a second water barrier to movement along this narrow corridor.

The Zalew Wislany (Frisches Haff) is approximately 47 miles long by 6 miles wide and averages between 6 and 17 feet deep. In the north, the Kaliningrad (Königsberg) Ship Canal from Baltiysk (Pillau) to the Pregl' (Pregel) River is marked with pilings and is maintained at 27 feet deep and 157 feet wide. The depth of the Haff decreases from 17 to 13 feet south of the Pas'eka (Passarge) River, and the Elblag (Elbing) Canal in the south is dredged to maintain a depth of 13 feet.

Seaplane landings are feasible practically anywhere on the Zalew Wislany (Frisches Haff), but the best areas are off the shore at Tolkmicko (Tolkemit); north of Mamonovo (Heiligenbeil); north of the Kaliningrad (Königsberg) Ship Canal; and both north and south of Baltiysk (Pillau) off the Baltic shore.

3. Vegetation

Scotch pine is the dominant tree along the sandy coast, although the nearly pure pine stands may include some oak, beech, birch, and alder, (Figures 3 and 4). Pines were planted on the Mierzeja Wislana (Frische Nehrung) to help stabilize the sand dunes and to furnish timber. An extensive pine forest also grows at the north end of the Zalew Wislany (Frisches Haff). There are no sizable forests along the eastern shore.

C. The Interior Plain

1. Relief

The Interior Plain averages less than 60 feet in elevation, with the exception of the islandlike uplands of the

Kanlensko (Stablack) and WyżynaElbalaska (Elbingerhöhen), which rise to over 600 feet. Throughout the area the soils consist of heavy clay or loam mixed with sand and clay. Groups of boulders occur on the uplands (Figure 6). The major portion of the Interior Plain forms a rough triangle bounded by a line from Kaliningrad (Königsberg) east to Gusev (Gumbinnen), thence southwest to Sępopol (Schippenbeil), then joining Sępopol to Kaliningrad. The clay soils of the plain are extremely fertile and extensively cultivated, but many small areas are poorly drained or remain in forest (Figures 7 and 8).

An embayment of the Interior Plain follows up the Łyna* (Alle) River from Sępopol (Schippenbeil) to connect with a narrow east-west plain that forms the southern boundary of the border area. Another embayment extends from the Zalew Wislany (Frisches Haff) at Braniewo (Braunsberg), south along the Pasłęka (Passarge) River. This plain narrows between the Stablack upland to the north and the Wyżyna Elblaska (Elbingerhöhen) to the south; but it broadens again where it joins the narrow southern plain.

The Wyżyna Elblaska (Elbingerhöhen) highlands rise abruptly from the Zalew Wislany (Frisches Haff) in a series of knobby terraces up to 550 feet in elevation at Góra Maślana. Steep-banked rocky gorges occur on the western slopes (Figure 9). At the higher levels

*For the part of the river south of the border, the Polish spelling (Łyna) is used in text references; for the part north of the border, the Russian spelling (Lyna) is used.

along the flat stream divides, however, there are numerous small villages and isolated farms on the sand and clay-loam soils, and the land is level enough for airstrips. The upland drops abruptly in the south and east to the Elblag (Elbing) River lowland.

The hummocky Kamiensko (Stablack) rises to 700 feet at Dzikowo Iławeckie (Schlossberg), northwest of the town of Górowo Iławeckie (Landsberg). The terrain is knobby and contains a number of small swamps, lakes, and streams bordered with broadleaf forest (Figure 10). The land is extensively cleared and settled, and neither the Wyżyna Elblaska (Elbingerhöhen) nor the Kamiensko (Stablack) uplands provide continuous or extensive cover.

Short, steep, wooded banks occur along the winding Lyna (Alle) and Pregoł (Pregel) Rivers, as well as along the Pasłęka (Passarge) River where it skirts the southern edge of the Kamiensko (Stablack), but for the most part the Interior Plain is open and only slightly rolling.

2. Drainage

a. Swamps, Marshes, and Lakes

The most extensive marshes and swamps are associated with the Pregoł (Pregel) and Lyna (Alle) Rivers in the north. A marsh ranging between 1 and 9 miles wide extends for some 16 miles east of Kaliningrad (Königsberg) along the Pregoł bottomland; this marsh contains a considerable number of canals and recurs intermittently as far inland as Chernyakhovsk (Insterburg). During high

water in March and April the whole valley of the Pregl' River becomes flooded, creating a broad east-west corridor along the northern edge of the border area that would be usable for small craft (Figure 11).

In the center of a triangle formed by the Pregl' (Pregel) and Lyna (Alle) Rivers lies the oval-shaped Zehlau Bruch, a marsh covering an area of approximately 20 square miles (Figures 12 and 13). The Zehlau Bruch merges into swampy woodland that stretches for some 40 miles parallel to the Pregl' River. This forest is interrupted at midpoint by the Lyna (Alle) River as it meanders north from the border (Figure 14). A small open marsh in the center of the forest east of the river, might prove, like the Zehlau Bruch, to be a useful target for air drops. Several scattered marshes and forests extend south of the Zehlau Bruch to small swampy sections of forest which straddle the border in the upland of the Kamiensko (Stablack) and to lowlands west of Nordenbork (Nordenburg).

The land is better drained south of the border, except near Braunsberg (Braunsberg), where there are small isolated swamp forests and marshes.

Lakes on the Interior Plain are limited to a few small ponds in the Kamiensko (Stablack) and the mile-long Jarzen (Tiefen See) south of Tsinten (Zinten).

b. Rivers

(1) Upper Pregl' (Pregel)

Width : 80-130 feet

Depth : 6.5-8.5 feet

Bottom: Coarse to fine sand

Lower Pregl' (Pregel)

Width : 160-230 feet

Depth : 6.5-8.5 feet

Bottom: Fine sand and muck

The Pregl' is the largest river in the border area. Numerous wharves along its banks indicate extensive boat traffic both on the Upper Pregl' from Chernyakhovsk (Insterburg) to Znamensk (Wehlau) and on the Lower Pregl' from Znamensk to Kaliningrad (Königsberg). The small and relatively insignificant Rossback and Pissa Rivers combine with the Angrapp (Angerapp) River to form the Pregl' headwaters above Chernyakhovsk.

The current is slow even in flood, and the river sometimes backs up in the lower section when strong westerly winds raise the water level of the Zalew Wislany (Frisches Haff). The stream is not fordable, and the entire 1- to 4-mile-wide valley may be shallowly flooded in spring.

(2) Middle Lyna (Alle)

Width : 45-100 feet

Depth : 3-6.5 feet

Bottom: Sandy to stony, with weeds

Lower Lyna (Alle)

Width : 100-130 feet

Depth : 8 feet

Bottom: Firm sand

The Middle Łyna, south of Sępopol (Schippenbeil), and the Lower Łyna, from Sępopol to Znamensk (Wehlau), together form the largest tributary of the Pregel'. The river makes sharp meanders between steep banks, with the current varying between fast and slow. Where dammed, the stream may be 1,300 to 2,600 feet wide. The channel is navigable for small boats, but it is weed choked and must be dredged every 5 or 6 years.

(3) Frisching

Width : 20-26 feet

Depth : 2-3 feet

Bottom: Mucky, with grassy banks

The small Frisching River has a slow current and is not difficult to cross except at its navigable mouth where it enters the Zalew Wiślany (Frisches Haff). In spring, however, the extensive marshes on either side are often flooded, both by heavy rains and by strong westerly winds that raise the water level of the Zalew Wiślany.

(4) Pasłęka (Passarge)

Width : 30-50 feet

Depth : 3 feet

Bottom: Sand, gravel, and muck

The Pasłęka (Passarge) River has a slow current and constitutes an obstacle only during the spring, when its wide valley is flooded, and below Braniewo (Braunsberg), where it is navigable.

3. Vegetation

The forests of the Interior Plain are similar to those of the northern United States. They include two major vegetation types: (1) Mixed coniferous and broadleaf forests on the clay, loam, and sandy soils, and (2) broadleaf swamp forests, grassy marshes, peat bogs, and tundralike muskeg bogs scattered throughout the poorly drained sections of the border area.

a. Mixed Coniferous and Broadleaf Forests

The coniferous trees include pine, spruce, fir, and larch; the broadleaf trees include oak, birch, alder, aspen, and beech (Figures 14, 15, and 16). The conifers predominate in most areas, especially on the sandier soils. They generally support less undergrowth than the broadleaf trees, which prefer clay and loam soils. Both types grow in poorly drained areas. Nearly pure stands of deciduous trees occur in the rocky gorges of the Wyżyna Elblaska (Elbinger Höhen), but most of the forests contain sufficient coniferous growth to afford cover in all seasons (Figures 9 and 17).

b. Swamp, Marsh, and Bog Vegetation

In many swampy areas, thin-stemmed oaks, birch, aspen, and alders predominate. The trees may even grow in shallow pools of water (Figure 8). Although this type of vegetation hinders travel, it is seldom impassable on foot and affords good emergency cover in summer; for all seasons, however, it is not as good as the pine forests.

Marshes may contain useless coarse grass and cattails, or they may be meadowlands suitable for hay (Figures 18 and 19). Many such meadows are located along the borders of streams like the Frisching, which are particularly subject to flooding. [redacted]

25X1C

25X1C

Peat is dug in many of the drier marshes. These peat bogs are seldom difficult to traverse, but they should be avoided in case they are in operation (Figure 20).

The Zehlau Bruch southeast of Kaliningrad (Königsberg) is an outstanding example of tundralike muskeg bog, or "high moor." Heather moss, sedges and alders grow in a thick tangle that chokes off all tree growth with the exception of bunches of pine and a few birches. This mat of vegetation builds up in the form of a low arch and maintains a high water table. Stretches of open water occur near the center of the moor (Figures 12 and 13).

D. [redacted] Plateau

1. Relief

East of the Interior Plain is a broad northeast-southwest ridge with soils of mixed clay, loam, and sand with scattered boulders. Elevations average over 300 feet and attain 1,000 feet in the Szeskie Wzgorza (Seeskerhöhen), near Goldap (Goldap) (Figures 21 and 22). The large, irregular Masurian Lakes occupy a

broad north-south depression intersecting the ridge, and smaller, steep-banked finger lakes are found to the east of the Masurian Lakes (Figures 23, 24, 25, and 26).

The terrain on this plateau is extremely varied and ranges from long, steep, rampartlike hills, conical knobs, and pothole swamps to broad plains and marshes near the large irregular lakes. Along these lakes, terraces 50 to 60 feet high alternate with broad, marshy, shelving shorelines (Figure 23). The lakes and marshes limit vehicles to a few strategic roads. On the other hand, the broken upland terrain, even when forested, offers no real hindrance to vehicles except after heavy rains and during the spring thaw, when the clay soils become slick and greasy and the sandy soils deeply rutted (Figure 27). The region is widely cultivated, but mixed forests cover a part of the border in the Puszcza Romincka (Romintener Heide) (Figure 28).

2. Drainage

a. Swamps, Marshes, and Lakes

The land on either side of the town of Nordenbork (Nordenburg) is poorly drained, but the forested swamps west of the town lead south to small scattered marshes and forests west of the Masurian Lakes. Although well populated, the Masurian Lakes region and the marshes form a natural corridor south from the border area.

Immediately south of the boundary, the meandering Angrapp (Angerapp) River swings in a bend around a 15-square-mile swamp

forest that encloses a small open marsh at its center. This lowland becomes flooded in spring or after heavy rains, and hence is little used except for two canals that cut across the area inside the bend of the river. A narrow, densely populated strip of land south of the river intervenes between this lowland and an extensive forest to the east of the Masurian Lakes, which is surrounded by several small lakes. This woodland forms one of the main areas of forest cover near the border.

East of Goldap (Goldap) the border traverses some 13 miles of hilly forest and swampland in the Puszcza Romincka (Romintener Heide). This is the largest forest along the border line; the area to the south of the Puszcza Romincka, however, is extensively cultivated, despite numerous steep-banked finger lakes and irregular conical hills. To the north, a single swamp covering 5 square miles is isolated on the well-populated plain west of Nesterov (Stallupönen).

Farther east, although the number of lakes, small marshes, and peat bogs is greater, the population is dense. Cover along the border line is scattered except in a partially forested and swampy section between two lakes, Vishtitis (Wystitter See) and Jez Wigajny, and along the marshy course of the Sheshupe (Scheschuppe) River. South of these two areas, irregular hills enclose several small lakes, which extend east of Suwalki to scattered swamp forests south of the border area.

The upland lakes are concentrated chiefly south of the border. They consist of the interconnected Masurian Lakes, which continue

south beyond the border area; some small isolated lakes; and the narrow finger lakes, which are aligned roughly north-south. Depths of the larger lakes vary from less than 50 feet in the marshy lakes to over 300 feet in the steep-banked finger lakes. Seaplane landings are possible on all but the smallest lakes, but the north-south alignment of the finger lakes might necessitate cross-wing landings and take-offs.

b. Rivers

(1) Angrapp (Angerapp)

Width : 50-130 feet

Depth : 5 feet

Bottom: Sand and gravel

The Angrapp River flowing north from the Masurian Lakes is swift, shallow, and unnavigable, but it is fordable in the upper sections. The stream bed is cut deeply into a mile-wide valley, which becomes shallowly flooded in spring and after high rains.

(2) Sheshupe (Scheschuppe)

Width : 26-60 feet

Depth : 1.5-3 feet

Bottom: Sand, gravel, and boulders

The Sheshupe River is a slow, marsh-bordered stream with several fords, offering little difficulty to crossing. During the spring

flood, however, the whole valley which is 100-200 feet wide, may be 6-10 feet deep in ice-choked water.

3. Vegetation

The mixed forests and marsh vegetation characteristic of the Lake Plateau are similar to those of the Interior Plain.

E. The Lake Plain

1. Relief

At the extreme eastern end of the boundary, part of a broad sand plain slopes to the south away from the broad ridge of the Lake Plateau. There are numerous lakes in this area, and the ground-water is close to the surface. Rains quickly soak the sandy soil, making the unsurfaced roads impassable for vehicles, and extensive swamps offer serious obstacles to travel. However, tall pine forests afford continuous cover across the border, and settlements are widely dispersed. Along with the Lake Plateau, this forested section offers the greatest possibilities for protection and covert movement.

2. Drainage

a. Swamps, Marshes, and Lakes

In the extreme eastern section, the border swings south, paralleling a system of lakes and streams that drain into the Neman (Niemen) River. The border line traverses half the length of a large lake, Jezioro Galadus, which is narrow and steep-banked, with small open marshes on the higher land on each side and a swampy forest at the south end.

Beyond Jezioro Gaładus, the border line runs between two smaller lakes and then through almost continuous marsh and swamp forest to the Belorussian frontier. Between the border and the Neman (Niemen) River in the east, there is a maze of dozens of finger lakes, many of them interconnected. Between the lakes are scattered small marshes and forests. Small settlements are clustered on the few patches of arable land.

A small chain of lakes and marshes parallels the border on the west and drains into the Marycha River, which forms the final eastern segment of the border. Although the Marycha Valley is largely cleared and settled, this section of the border penetrates a part of the broad band of swampy forest that extends from Suwałki, east to the valley of the Neman River.

b. Rivers

(1) Marycha

Width : 15-50 feet

Depth : 1.5-5 feet

Bottom: Firm sand

The Marycha River has a slow current, and low, marshy banks. It is not difficult to cross except during the spring flood.

(2) Upper Czarna Hancza

Width : 15-50 feet

Depth : 3-5 feet

Bottom: Sandy or gravelly

Lower Czarna Hancza

Width : 65-100 feet

Depth : 2.5-10 feet

Bottom: Loamy and sandy

The current of the Czarna Hancza is slow and the upper section offers no obstacle, but the variable depth and the lack of regular fords make the lower section more difficult to cross. The wide valley is largely meadowland which is shallowly flooded in spring.

3. Vegetation

On the eastern part of the Lake Plain, pines predominate over all other species. The trees have tall, high-branched trunks and there is little underbrush. Although these forests are often called heaths, their chief resemblance to a heath is that mosses and heather form a thin ground cover under the trees (Figure 29 and 30). The pine forests are easily traversable and furnish good cover during all seasons of the year.

The composition of the vegetation in the extensive marshy areas of the Lake Plain is similar to that of the marshes of the Interior Plain, already described.

F. Traversability

The swamp, marsh, and lake areas are prohibitive to the use of vehicles except when frozen (late December to mid-March), but they are not impassable on foot. Peat is cut in many of the bogs, and others support yearly crops of marsh hay (Figures 19 and 20).

Although knee-deep muck is common in the Zehlau Bruch, the area was formerly a game and forest preserve often visited by hikers.

Movement on foot through swamp and marsh areas is slow, devious, and uncomfortable during all seasons. The best conditions prevail in late summer, when the water table is low, the poorest during the spring thaw, when otherwise traversable low areas may be several feet deep in water. In the late fall also, thin ice and snow-covered spring holes make footing treacherous, and there is a distinct danger of freezing as the result of a misstep. These dangers continue to some extent all winter but are lessened considerably by the use of skis or snowshoes.

Icing occurs between late December and mid-March, and there are spring floods in March and April. Most of the streams are fordable during the period of low water in late summer and early fall, and the larger water bodies are warm enough to swim across during this period. Bottom conditions are generally firm, but care must be exercised to avoid twisting an ankle on the rocky beds of the faster flowing streams or bogging down in the deep muck in the marsh areas. Even deep muck, however, can be traversed by a combination of swimming and crawling, and these water barriers serve to throw dogs and trackers off the trail.

Rafting across the lakes and larger rivers may be dangerous because of floating ice and debris in late fall (November and December) and early spring (March and April), but for the most part

river valleys are broad and floodwaters, though widespread, are not turbulent. Since open water may be found throughout the border area, a rafting device such as an air mattress or air pillow would be extremely useful. Shallow-draft, flat-bottomed boats are commonly used in the more populated marshlands and along waterways. Some of these craft might occasionally be found unguarded, but their use would be limited since they are not readily portable (Figures 11 and 26).

The bogs are impassable to vehicles except on prepared roads, and even the roads are liable to vibrate and break through under sustained use. The bogs are less dangerous on foot, and travel is safest in summer when the water table is low. However, the open character of these bogs exposes travelers to being spotted from the air. Therefore, travel routes should be chosen along the edge of the woods or in the thick brush and weeds along watercourses.

Camouflage is possible in all seasons. Green, brown, gray, and black blend most effectively with the forests and marsh vegetation, even in winter, although dark clothes would stand out sharply in an open snow field. Black knee-length rubber or leather boots are most practical for use in the low areas, and would appear least unusual (Figure 11).

The dry pinelands offer good conditions for travel throughout the year; there is a minimum of undergrowth, and paths as well as forest lanes are numerous. The swampy woodlands are less traversable, but they too are crossed by paths, survey lanes, and in some cases canals.

Considerable lumbering has been done in the border area, and since horses are used to transport the logs, there are old stables as well as foresters' huts which might serve for shelter. Timber cutting is mainly carried on in winter, but there is also some summer lumbering for which wheeled carts are used (Figure 29). Logs are stored in some of the lakes, and log booms or rafts are floated down both streams and canals.

In addition to the summer and winter woods roads, rectangular survey swaths are cut through most of the forests at intervals of 2,600 feet, and lumbering operations have cleared distinctive oblong areas.

25X1C [redacted] 25X1C

III. Survival Factors

A. Plants

1. Useful Types

The forests and marshes of the border area offer the foot traveler considerable aid and comfort. The mosses and grasses when dry may be used for padding clothes or boots or in bandages. Spruce boughs may be used for bedding or to make a quick, hot fire. Even in wet weather the sheltered stub branches of the trees remain reasonably dry. This wood may be ignited by first burning inner layers of birchbark, and the fire may be sustained by longer-burning

pine knots dug out of stumps. However, pine pitch burns with a dense black smoke, and the nearly smokeless fire of dry swamp alders and willows is safer. During dry summers there is also some danger from forest fires in the pinewoods of the Lake Plain.

Edible plant materials include a large variety of roots, stems, berries, nuts, grasses, and even tree bark. Many of these are commonly found in the United States also and are readily recognizable.

Edible roots include those of the wild onion, springbeauty, sedge, water lily, Solomons-seal, brake fern, arrowhead, wild potato, and cattail. Most roots may be eaten raw, boiled, or roasted.

Edible stems, shoots, and leaves include those of burdock, sorrel, goosefoot, plantain, purslane, dock, dandelion, mushroom, moss, rock tripe (lichen), and young cattails.

Berries and fruits are extremely plentiful and may be found along the marsh edges and in bogs, fields, and forest clearings. They include juneberry, hackberry, mulberry, blackberry, raspberry, elderberry, blueberry, gooseberry, cranberry, currant, hawthorn, wild cherry, grape, pear, plum, and apricot.

Nuts may be obtained from beech trees, and seeds from pines and common grasses. Edible inner bark may be stripped from the pine, aspen, birch, and willow.

Since the border area is widely cultivated, these natural foods may be supplemented by the prevalent rye, potato, and beet crops found in fields in summer and fall and stored in barns in winter and spring.

2. Toxic Types

Toxic plants are few, but include the amanita (which may be mistaken for mushrooms) and baneberry, as well as some types of wild potatoes. Poisoning can be avoided by not eating any unrecognized type of mushroom, berry, or root; or a very small piece may be sampled to test the effect. The flowers of all plants are edible.

B. Wildlife

1. Edible Types

A variety of fish are found in the lakes, streams, and the Zalew Wislany (Frisches Haff). Eel, carp, pike, perch, smelt, and roach occur in the fresh-water streams and lakes, and cod, herring, salmon, and flounder are available in the coastal waters. Food animals are fewer; they include rabbits, mice and lemmings, birds, frogs, and even grubs.

2. Dangerous Types

Wild boars are not likely to be seen, nor is the European viper particularly abundant in the border area. These are the only dangerous types of fauna that might possibly be encountered. Insect pests, however, are both numerous and troublesome. Mosquitoes, flies, ticks, and lice are prevalent in the swamps and forests and may be present in deserted cabins. Proper precautions against these insects should be taken if possible, since malaria, typhus, and tularemia are endemic in the area.

IV. Climate

A. General

The border area lies between two major climatic zones, the temperate, coastal climate of western Europe and the cold climate of continental eastern Europe. Consequently years with long, snowy, northern winters and warm, dry summers often alternate with temperate years having mild winters and humid summers. Precipitation averages 25 inches, and is abundant and well distributed through the year. The average monthly temperatures range from the low twenties to the low sixties.

Although the area is located on the coast, the warming influence of the sea does not reach far inland. On the contrary, the cooling effect of the long-lasting ice on the lakes and the Zalew Wislany (Frisches Haff), combined with cold snaps and sudden snowstorms in April and May, means that there is practically no spring.

B. Summer

Summer begins in June and lasts through August. The season is warm and pleasant. The days are long at this high latitude, and temperatures may rise as high as 86°F, although they average in the sixties.

Thunderstorms occur on about 10 percent of summer days on the average, and the accompanying heavy rains bring the year's maximum precipitation in July and August. The biggest storms build up over the Lake Plateau, where elevation and evaporation are greatest, and

precipitation throughout the year is heavier on the uplands (27 inches as compared with 24 inches on the lowlands). There is somewhat less rainfall on the Interior Plain east of the Kamiensko (Stablack), and in dry summers the farmers welcome the heavy dew near the Zalew Wislany (Frisches Haff) and the Masurian Lakes.

Westerly or northwesterly winds prevail, but 5 to 8 calm days per month may be expected in summer. Although roads become dusty and there is some summer haze, the fresh breezes from the Baltic and over the lakes give notably good visibility in summer.

Sudden dense sea fogs affect only the coast, but ground fogs may form on cool nights in any of the marshy areas. These ground fogs can be of value [redacted], especially since they tend to form on clear nights and the fog layer is not always thick enough to obscure navigation stars. Morning mists burn off quickly in the summer heat. 25X1C

C. Fall

The fall months are September, October, and November. The border area is especially noted for its sunny September weather. Even after the first fall storms there are bright, warm periods of "Old Wives' Weather" (the equivalent of our Indian Summer). But as winter approaches, storms increase in intensity and duration.

Fall temperatures average in the low forties, but extremes may reach as high as 75°F and as low as 10°F. Frosts occur earliest in the eastern part of the Lake Plateau and latest along the seacoast,

but the unsettled transition period from fall to winter continues through November with frosts and thaws alternating in quick succession.

Heavy rains and snow flurries in late fall make this season the second wettest of the year. Winds continue generally from the southwest, but an average of 6 calm days occurs in October.

Visibility remains good until the end of October, then decreases rapidly with the onset of shorter days, overcast skies, and winter storms. Fog occurs frequently along the coast and near the lakes, and cloud masses tend to pile up over the uplands.

D. Winter

Winter begins with December, and by Christmas time constant frost has set in and the rivers and lakes are frozen solid. January temperatures average between 20° and 30°F. Although winter minimums of -31°F may occur, the average low is 0°F and the high is 40°F. There are 104 days of below-freezing temperatures in Kaliningrad (Königsberg) and 145 in Olecko (Treuburg) on the Lake Plateau.

Early heavy snowfalls make the uplands of the Kamiensko (Stablack), Wyżyna Elblaska (Elbingerhöhen), and Szeskie Wzgorza (Seeskerhöhen) favored ski areas, and east of the Masurian Lakes snow may last from 15 December to 1 April; elsewhere the period of snowfall lasts from 21 December to 21 March. The snow cover averages less than 8 inches in depth and is seldom continuous throughout the winter, except on the uplands. Each year, however, brings some deep snows and drifts that block the roads.

Sledges are commonly used for winter transportation, but in most of the area there is no serious need of skis or snowshoes for cross-country travel. It may be noted, however, that the terrain and winter conditions are well adapted to travel by small groups properly trained in cross-country skiing. The snow-covered marshes are traversable at this season and will safely support a man on skis, whereas on foot he might break through. [redacted] 25X1C

25X1C [redacted] the frequent storms and the nearly continuous winds, which are southwesterly or variable. Calm days average only 3 to 4 per month.

Winter is the period of poorest visibility. The hours of winter daylight are extremely short, and dense fogs occur 5 to 15 percent of the mornings. More than half the time, overcast skies may black out the moonlight as well as the displays of the Aurora Borealis, which are otherwise visible at this latitude.

E. Spring

Although the ice begins to break up in mid-March, the spring weather is cold and unsettled until May, owing to north and east winds over the frozen Gulf of Bothnia and the Finnish lakes. Extreme temperatures range from lows of 10°F in March to highs of 80° in May, but the average is in the low forties.

The snow cover disappears by 1 April, but snow flurries continue into May. Winds are variable, and calm days average only 3 to 4 per month. Fogs and cloudiness decrease rapidly in April and May, and visibility improves with the approach of the long summer days.

Between 1 May and 10 May, the marsh marigolds and currants come out, and by the middle of May the fruit trees blossom. However, the late frosts cause frequent crop losses and reduce the spring cultivation period to 30 days, thus limiting the crops to the hardier types such as potatoes, beets, and rye.

F. Climatic Influences

The most important single climatic factor in the border area is the extensive winter ice cover, that lasts from late December to late March. Whereas the ice paralyzes shipping even along the Kaliningrad (Königsberg) Ship Canal, it opens the Zalew Wislany (Frisches Haff) as well as the lakes and rivers to sledge and even automobile traffic.

Building activities are greatly hindered by the severe temperatures and the depth of freezing. Livestock is confined to the large barns for the winter, and the round of family activities other than ice fishing and lumbering is considerably reduced.

In spring, the ice floes piled up by west winds on the Zalew Wislany (Frisches Haff) damage piers and pilings and add to the severity of the spring floods by forming temporary dams at the river mouths. The bad effect of the spring floods on the traversability of roads and fields is augmented by the slippery clay soils and loose sands. Heavy summer rains also may create smaller local floods and render the roads temporarily impassable. The alternate freezing and thawing of late fall results in ground conditions comparable to those

of spring, but with the added disadvantage of steadily worsening weather, shorter days, and lower temperatures.

Summer and early fall offer the best traveling conditions, since the marshes and swamps are driest then, the rivers are lowest, and both cover and light are at their best. On the other hand, this is the period when almost the entire population is out in the fields, and to travel far across country completely undetected would be very difficult.

V. Population, Settlement, and Transportation

A. Peoples of the Border Area

The size and composition of the population in the Polish/RSFSR-Lithuanian SSR border area have changed markedly since 1939. The loss of population as a result of World War II, the flight of the people from invading armies, the deportation of all Germans and minority groups, and the present policy of transferring peoples and resettling the area have revolutionized the demographic structure of the region.

When the area was divided between Poland and the USSR, the Germans were deported and each country planned to resettle its part of the area with its own nationals. It has been reported that by 1947 the transfer of population in the 20-mile area on the Polish side of the border was almost completed.[1/] * In 1946, the population was

*Footnote references in Arabic numerals refer to the list of sources in Appendix G., 1.

approximately 150,000[2], as compared with more than 400,000 before the war. The continued effort of the Polish Government to increase the population in this area so that the region could regain part of its former agricultural productivity has resulted in a considerable increase, and in 1952 the population was estimated at about 300,000[3].

When the area that now comprises Kaliningrad Oblast of the RSFSR was part of East Prussia, the population was slightly more than 1,000,000, of whom 600,000 lived in the present 20-mile border area. In 1946, there were only 300,000 people in all of Kaliningrad Oblast[4]. In 1947, the population was estimated to be 600,000[5], and in 1950, approximately 900,000[6]. These figures include all military personnel in residence in the area. Although the distribution of the present inhabitants is not known, it is believed that the Soviets are moving "politically reliable" people into settlements from which the former inhabitants were deported.

The population on the Polish side of the Lithuanian SSR border was reduced from approximately 120,000 in 1939 to 79,400 in 1946[7]. This loss was largely due to the war and to the transfer of former Lithuanian and Belorussian inhabitants from the area.

The density and distribution of population on the Lithuanian side of the border are similar to those on the Polish side. In spite of the recent changes in the ethnic composition of the population, the distribution of electoral districts[8] indicates that the number of people and their distribution have remained relatively stable.

B. The Coastal Plain

1. People and Settlement Pattern

The population distribution and settlement pattern of this area reflect the economic activity of the region. The small population of the Mierzeja Wislana (Frische Nehrung) is concentrated in several minor fishing villages scattered along the east coast of the sand bar (Figure 31). The largest of these, Łysica (Kahlberg Liep), became a popular seaside resort (Figure 4).

The mainland shore of the Zalew Wislany (Frisches Haff) is also characterized by a number of fishing villages. Along this coast, two small ports, Frombork (Frauenburg) and Tolkmicko (Tolkemit), developed. It is reported that a Soviet underground submarine base is located between these two ports.[2/] Inland from the shore, the population is scattered in small agricultural villages, isolated farmsteads, and former large estates. The farms are divided into cleared fields planted in grains (rye, oats, and barley) and hardy vegetables, of which potatoes are the most important (Figures 6 and 7). Large pastures extend alongside the cleared fields, from which they are separated by barbed-wire fences. Oats and barley, both spring sown, are seeded any time from the middle of April to the first week in June and harvested from late August until the middle of September. Rye, a winter-sown crop, is planted from 20 August until the middle of September and harvested the following July and August.

Most of the grain and forage crops offer only limited coverage for a cross-country traveler. Unfortunately, the time of best cover coincides with the time when many farmers are working in the fields.

Besides some small villages, which are made up of a few farms, an inn, and a few craftsmen's houses, there are only two cities in the coastal region near the frontier, Braniewo (Braunsberg) and Mamonovo (Heiligenbeil).

Braniewo is less than 5 miles south of the border and in 1940 had a population of 21,000 people. This city is reported to have been 90 percent destroyed during World War II; and in 1946 it has only 1,373 inhabitants. There are three small industrial establishments in the town — one fish-processing plant and two leather tanneries.

The present population of the coastal region consists of Poles, of whom some were persuaded to move into the area from the over-populated sections of Inner Poland and some were transferred from the former eastern provinces of Poland. These peoples have many similar cultural characteristics. Their language differs in many grammatical forms and idiomatic expressions characteristic of the speech of the different locales from which they came, but it is mutually understood.

The new settlers adhere to the Roman Catholic faith and have always been deeply religious. The efforts of the present Government to decrease the influence of the church do not seem to have been successful, and all churches are well attended.

The clothing of these people is poor and shabby. Men commonly wear ill-fitting trousers with jackets, sweaters or suit coats. Women wear loose, sacklike dresses or long full skirts with blouse, jacket, or sweater. Shawls are commonly worn, and a kerchief is the characteristic head dress. In the towns, both men and women pay more attention to the style of their clothes, which corresponds to western dress.

On the Soviet side, Mamonovo (Heiligenbeil), located approximately 3 miles north of the border, had a prewar population of 10,631. It is likely that this city suffered losses similar to those of Braniewo (Braunsberg). Much of the rubble in this city and other settlements has not been cleared away, and there are still many partially destroyed buildings that have not been repaired. Such houses are uninhabited and may provide excellent hiding places for an intruder.

The cultural characteristics of the present inhabitants cannot be precisely determined. The Great Russian dialect is the official language on the RSFSR side of the border, but the extent to which it is spoken by the present population is not known.

25X1C [redacted] 25X1C

25X1C [redacted] Several of these report that Mongols and Tartars are settled in the rural areas.[10/] [11/] [12/] Others state that agricultural workers have come from the Moscow area.[13/] [14/] Still others report that almost all types of citizens of Soviet Russia are now represented in Kaliningrad. These include Great Russians, White

Russians, Ukrainians, Kirgizi, Tartars, and Jews.[15/] It can be assumed that although many local dialects are commonly used by groups of citizens from widely scattered areas of the Soviet Union, Great Russian is understood by all the residents of the area. A stranger traveling through the area ought to have a good command of Great Russian.

The Orthodox Church is, in all probability, the only church in Kaliningrad Oblast to which large numbers of the present population adhere. Since it was the intention of the Soviet authorities to resettle this region with "politically reliable" people, it is very likely that religious practices are minimized.

2. Roads and Railroads

The road pattern of the coast region consists of one main north-south road, which connects, either directly or via branch roads, all the main towns of the region. This road is hard surfaced and about 6 meters wide. A number of other roads, only slightly narrower than the main road, radiate in spoke-like fashion from the towns to most of the smaller settlements. In addition the single autobahn of the area, which connects Elblag (Elbing) with Kaliningrad (Königsberg), roughly coincides with the eastern limit of the coastal district. This highway was built for rapid transportation between the two cities it connects and bypasses most of the other large settlements.

The coastal region is served by the Elblag (Elbing)-Kaliningrad (Königsberg) railroad, which consists of two lines, one connecting the coastal towns of Tolkmicko (Tolkemit) and Frombork (Frauenburg) with Braniewo (Braunsberg), the other connecting the inland towns of Bogaczewo (Reichensee), Braniewo, Mamonovo (Heilingenbeil), and Kaliningrad. The chief physical characteristics and operating details of these lines are as follows:

Elblag (Elbing)-Tolkmicko (Tolkemit)-Braniewo (Braunsberg) Sector:

Trackage: Single track, standard gauge

Schedule: 3 passenger trains daily, 4 on Sundays

Average speed: 19 km per hour, including stops

Bogaczewo (Reichensee)-Braniewo (Braunsberg) Sector:

Trackage: Double tracked; one track standard, the other broad gauge

Average speed: 45 km per hour, including stops

Schedule: 3 passenger trains daily

Remarks: Braniewo (Braunsberg), the last Polish station on the Polish-RSFSR border, is a transloading station. This is reported to be one of the principal lines used for military communications from the USSR to the west,[16] as well as for transportation of freight from Poland to the USSR.[17] The 1952 official timetable for Soviet traffic through Poland, however, does not list this line.

Mamonovo (Heiligenbeil)-Kaliningrad (Königsberg) Sector:

Connecting points: Primorskoye Novoye (Volittnik), Ladushkin (Ludwigsort), Svetloye (Kobbelbude)

Trackage: Double tracked; one track standard, the other broad gauge

Average speed: 24 km per hour, including stops

Schedule: 1 local passenger train daily

Remarks: Mamonovo is a transloading station and the first Soviet station north of the border.

C. The Interior Plain

1. Settlement Pattern

The Interior Plain comprises one of the most fertile agricultural districts of the border area. The western part, almost entirely cleared of its forests, was inhabited by the landed aristocracy of East Prussia. Large estates, which have now been converted into kolkhozes and sovhozes, are scattered throughout the area, usually isolated in the country rather than near villages. Large fields, meadows, and woodlots surround the impressive manor house with its farm buildings and small cottages that housed the families of the farm workers (Figures 1, 2, and 32). The agricultural land use was similar to that of the coastal region, with the addition, on many estates, of stock breeding. Many smaller farmers also built their cottages in the center of their fields (Figure 33), while others lived in small farm villages composed of a group of farmhouses lining one or two roads.

The landscape of the eastern section of the Interior Plain differs considerably from that of the west. Here, large tracts of land have not been cleared and there are still forests that offer excellent concealment for an intruder (Figure 30). It is possible to travel north

of the Masurian Lakes along a route that is everywhere within 2 miles of woodland. The settlement pattern of the cleared areas is essentially the same as that of the western section.

Numerous small towns, most of which had a prewar population of less than 10,000, developed as a result of the German Government's effort to industrialize the area. These towns were primarily market centers that grew up at the junctions of important roads or railroads. They were laid out fairly regularly accoring to plan and were built in the form of a chessboard, with a rectangular market place in the center (Figures 34, 35, and 36). The industrial development of these towns was limited to food-processing enterprises, tanneries, and lumber mills.

As far as can be determined, there is little restriction on movement in Poland outside the immediate frontier zone (a 5-km strip adjacent to the boundary). All persons must carry identification documents, but unless suspicion is aroused by an individual's behavior, he is not stopped by the militia. In the frontier zone proper, on the other hand, the regulations for movement or residence are very strict. Temporary and permanent residents require special security clearance and nonresidents must have special passes allowing them to enter.[18/] The following towns are in the vicinity of the frontier zone of the Interior Plain and should be avoided by anyone not wishing to risk detection.

Bartoszyce (Bartenstein) is located on a highway that leads to Kaliningrad (Königsberg) and on one of the few railroads that carry transit traffic between Poland and the RSFSR. It is an administrative center for the powiat (second-order administrative division), and its population of 4,300 in 1946 represented one-third of its prewar size.

Górowo Iławeckie (Landsberg) had only 900 inhabitants in 1946, but in spite of its small population was designated by the Poles the administrative center for the powiat of the same name. A large new silk factory has recently been built here, and this has undoubedly attracted new settlers.

Sępopol (Schippenbeil) is less than 5 miles from the border, but there is little information on this town. It is the last Polish station on a railroad line extending from Lidzbark Warmiński to the border.

2. People

The present inhabitants on the Polish side of the Interior Plain, like those in the Coastal Plain, have come either from former Eastern Provinces of Poland or from Inner Poland and have similar cultural characteristics. Those who were transferred from the Eastern Provinces have a dialect that includes many Russian and Lithuanian words to which a Polish ending has been added, whereas those from the provinces of Inner Poland have a dialect that is more closely associated with the Polish used in newspapers. The difference in dialects is not great, and most of the people can understand one

another. A nonresident passing through the area who speaks a dialect different from those used locally, however, is easily distinguished. German is still spoken by the few natives who have escaped deportation. These native Germans represent the only non-Catholic element in the area.

Clothing is similar to that of the inhabitants of the coastal region and reflects the low standard of living of the population.

There is no definite information on the cultural characteristics of the population of the Russian side of the Interior Plain. Current information on the status and development of towns on the RSFSR side of the border is limited to the designation of the rayon (second-order administrative division) centers. These towns are: Bagrationovsk (Preussisch Eylau), less than 2 miles from the border; Zheleznodorozhnyy (Gerdauen), less than 2 miles from the border in the eastern part of the Interior Plain; and Pravdinsk (Friedland), about 7 miles from the border in the central part of the Interior Plain. Other small towns that were important market centers on main roads are Tsinten (Zinten) and Nordenbork (Nordenburg).

3. Roads and Railroads

The dense road network in the Interior Plain consists of two road systems that begin at Kaliningrad (Königsberg) and run southeastward, connecting all major towns of the area. One of these connects Kaliningrad with Bagrationovsk (Preussisch Eylau) and Bartoszyce (Bartenstein); the other connects Kaliningrad with Pravdinsk

(Friedland), Zheleznodorozhnyy (Gerdauen), and Nordenbork (Nordenburg). These are crossed by many roads running south, southwest, and northeast. In fact, the road net is so dense that there are few fields longer than 1 kilometer that are not crossed by a road or lane.

Although the present railroad network of the Interior Plain represents only part of the prewar system as it was developed and used by the East Prussians, it is nevertheless adequate. Two lines of this system cross the border and are used for Soviet transit traffic through Poland. These are: (1) the Korsze (Korschen)-Wiatrowiec Warmiński (Wöterkeim)-Sępopol (Schippenbeil)-Lidzbark Warmiński (Heilsberg) line, of which the sector Korsze (Korschen)-Wiatrowiec Warminski (Wöterkeim)-Bartoszyce (Bartenstein) connects with the Bagrationovsk (Preussisch Eylau)-Kaliningrad (Königsberg) line, and (2) the Korsze (Korschen)-Skandawa (Skandau) line that connects with the Zheleznodorozhnyy (Gerdauen)-Chernyakhovsk (Insterberg) line. Following are details of the sectors of these and other lines that cross the region.

Korsze (Korschen)-Wiatrowiec Warmiński (Wöterkeim)-Bartoszyce (Bartenstein) Sector:

Trackage: Single track, standard gauge

Schedule: 5 passenger trains scheduled daily from Korsze (Korschen) to Bartoszyce (Bartenstein); 2 additional trains from Wiatrowiec Warminski (Wöterkeim) to Bartoszyce (Bartenstein)

Average speed: 34 km per hour, including stops

Remarks: Although the 1952 Polish timetable lists Bartoszyce (Bartenstein) as the last Polish station of the Polish-RSFSR border, the 1952 official timetable for Soviet transit traffic through Poland lists Glomna (Glommen), located about 9 km from the border, as the last stop before the border.

Bartoszyce (Bartenstein)-Lidzbark Warminski (Heilsberg) Sector:

Trackage: Single track, standard gauge

Average speed: 40 km per hour, including stops

Schedule: 4 passenger trains daily

Korsze (Korschen)-Skandawa (Skandau) Sector:

Trackage: Single track, standard gauge

Average speed: 32 km per hour, including stops

Schedule: 3 passenger trains daily

Remarks: This sector crosses the border and connects with the Zheleznodorozhnyy (Gerdauen)-Chernyakhovsk (Insterberg) line.

Wiatrowiec Warminski (Wöterkeim)-Sepopol (Schippenbeil) Sector:

Trackage: Single track, standard gauge

Average speed: 14 km per hour, including stops

Schedule: 2 passenger trains daily

Bagrationovsk (Preussisch Eylau)-Kaliningrad (Königsberg) Sector:

Trackage: Single track, broad gauge

Average speed: 22 km per hour, including stops

Schedule: 3 local passenger trains scheduled daily

Remarks: The official Soviet passenger timetable for the year

1950 lists Bagrationovsk as the closest Soviet station to the Polish-RSFSR border. The official passenger timetable for the Lithuanian railroad system for the winter of 1952 lists a new station, Dolgoruhovo as the last Soviet station on the border. The location of the new station is not known.

Zheleznodorozhnyy (Gerdauen)-Chernyakhovsk (Insterburg) Sector:

Trackage: Double tracked; one track standard, the other broad gauge

Average speed: 42 km per hour, including stops

Schedule: 2 passenger trains daily

D. The Lake Plateau

The settlement pattern of this region is varied and reflects the differences in physical characteristics as well as in the cultural development of Germany, Poland, and Lithuania, the three countries that formerly occupied and developed different parts of the area.

1. Sparse Polish Settlement of the Masurian Lakes Area

In the Masurian Lakes district, which constitutes the southwestern part of this region, numerous fishing villages extend along the lake shores. These villages are really no more than small groups of log cabins that house the families of the fishermen (Figures 36 and 37). Most families have a small plot of land which provides them with vegetables. Away from the fishing villages are the scattered farmsteads, which are often surrounded by fields.

Natives make up a larger proportion of the population of this area, which was settled by Poles in the 15th century. Since then the people have had almost no contact with Polish national life, but they were permitted to remain in Polish-administered East Prussia. As a result, there has been less population change here than in most of the border region. Military destruction and forced deportation of labor to Germany during World War II are the main causes of depopulation. The present population includes a sizable number of the original inhabitants, who are, in the main, Protestant by faith. They speak the Masurian Polish dialect, which is not readily understood by Poles who speak modern Polish. There is no distinctive feature of dress in this region. The high boots and visored caps frequently seen in towns of former East Prussia are likely to be more common here than in the other regions discussed.

The inhabitants of the numerous isolated farms in the Lake Plateau live secluded lives, their main diversion being an occasional trip to the small provincial towns that have developed at important traffic junctions. These towns are built around market squares, and the houses line streets, which form a rectangular pattern (Figure 36). The following towns are typical:

Węgorzewo (Angerburg), the most important town on the thoroughfare through the lake chain, had a population of 10,900 in 1940. It suffered heavy losses during the war and was estimated as being 80 percent destroyed. The 1946 census reports 1,184 inhabitants. The

fact that the Communist Government of Poland has designated Węgorzewo as the administrative center of the powiat of the same name indicates that they plan to develop it to its former position. It has also been designated as a military center.

Ketryzyn (Rastenburg), with a 1940 population of 19,600, represented one of the larger towns in the area. It owed its importance to its location on the Ełk (Lyck)-Bartoszyce (Bartenstein) railroad. In 1946, the population was reduced to 5,468, and only a few of its food processing industries were still in operation. Among these, the sugar refinery is the most important and is scheduled for enlargement by the present government.

Giżycko (Lötzen) is strategically located at the eastern end of the pass between the two largest lakes of the Masurian system (Figure 38). Although this town was reported to have been 60 percent destroyed, it was one of the first towns that the present government made an effort to rebuild. In 1946, there were 4,534 inhabitants, many of whom were Masurians who had lived in the area when it was part of East Prussia. Giżycko is a military center and much of the vicinity is a restricted area used for military purposes.

2. Densely Settled Area of Former East Prussia

The area to the northeast of the Masurian Lakes represents a transition in settlement pattern from the large estates with their well-defined, cleared fields (now kolkhozes or sovhozes) to the small individual farmsteads (Figure 33) settled and developed

by the former Lithuanian minority in East Prussia. These farmsteads increase in number in the vicinity of the Puszcza Romincka (Romitener Heide) (Figures 15 and 28), and large areas of land not in farms are scarce. Therefore, anyone moving across country in this area will have difficulty in avoiding meeting people. Many of these individual farms have been combined to form kolkhozes, and the members of the kolkhozes, who are Soviet citizens coming from various places in the Soviet Union, occupy the homes of the former inhabitants of the region. The edge of the Puszcza Romincka is crowded with villages as well as farms; this section was formerly one of the most densely populated regions of East Prussia.

The only Soviet town in the vicinity of the border is Ozersk (Darkehmen) (Figure 40), the administrative center for the rayon of the same name. Located on the Elk-Goldap-Chernyakhovsk road, it will continue to be an important market center for the surrounding agricultural region. The other Soviet towns — Gusev (Gumbinnen) and Nesterov (Stallupönen) — are in the Pregl' (Pregel) Valley, the northern limit of the region.

On the Polish side of the border are two towns that had significant local importance under East Purssian development. These are Goldap (Goldap) and Olecko (Treuburg). Goldap, located approximately 2 miles from the present border, has been named a powiat administrative center. This town suffered severe losses during World War II,

and the Poles have estimated that it was 90 percent destroyed. An indication of this destruction is the loss of population from 12,800 in 1940 to the 632 people registered in the 1946 census.

Olecko (Treuburg), the administrative center for the powiat Olecko, is located about 20 miles from the present border on the main road from Ełk (Lyck)-Gołdap (Goldap)-Chernyakhovsk (Insterburg).

3. "Ribbon" Villages of Poland and Lithuania

South and east of the Soviet section of the Lake Plateau are the districts that have been under Polish and Lithuanian development since the end of World War I. Settlement on the Polish side is made up of many small rural villages that follow the Strassendorf pattern (often called "ribbon" towns). The very simple wooden cottages of the inhabitants line the main street of the town, and the long, narrow fields behind the houses are farmed. Collectivization has not been complete in this area, and it is likely that many of the old inhabitants of the region still live in their homes and cultivate their own fields. This same rural village pattern continues across the border into Lithuania. There are a larger number of isolated farms in Lithuania than in Poland, most of which, however, have been united to from kolkhozes and sovhozes.

The ethnic composition of the population in Lithuania has been greatly altered since World War II. Many of the Lithuanians who resisted Soviet influence have been deported and replaced by "politically reliable" Russians. Consequently, there is less ethnic

homogeneity here than anywhere in the border area. Russian and Lithuanian are both spoken by the inhabitants. The Lithuanians are Roman Catholics and have resisted all repressive measures directed against the church, whereas the Russians adhere to the Russian Orthodox church. The dress of the two groups, which is generally the same, is similar to that of the inhabitants of the rest of the border area, as already described.

Suwałki is the largest town on the Polish side of the Lake Plateau region. In 1946, it had 13,670 inhabitants. Since the town is is the administrative center for the powiat of Suwałki, and is scheduled to develop its food-processing and local textile industries, it will remain as the most important town of the region.

The towns in the Lithuanian part of the Lake Plateau are few. The more important ones are located at the outer limit of the 20-mile border region, on the main road from Kaliningrad (Königsberg) to Mariyampole (Mariampole). These include Virbalis, with a 1939 population of 4,702; Vilkavishkis (Vilkaviskis), 1939 population 8,733; and Mariyampole (Mariampole), 1939 population 15,768. Although, the present population of these towns is not known, it is believed that their size is approximately the same as in 1939, because the reduction caused by war devastation and deportation has been offset by the recent influx of the rural population to urban centers.[19/] Kalvariya (Kalvarija), with a 1939 population of 5,433, is located 8 miles from the Polish border and is the most important town in the vicinity of the border.

4. Roads and Railroads

The road net of the Lake Plateau region illustrates the contrast between the well-developed system of the west, with main roads connecting all towns and other hard-surfaced roads branching from them to the smaller settlements, and the poor system in the Polish-Lithuanian SSR border region. There is only a single road, from Suwałki to Kaunus (Kovno), that can be classed as a main road. All other settlements are connected by poor dry-weather roads, which become impassable during the spring thaw (Figure 27).

The railroad net traversing the Lake Plateau region includes one line that crosses Poland and Lithuania, connecting Ełk (Lyck), Olecko (Treuberg), Suwałki, and Trakiszki and continuing northeast across the border to Shestokai, Kalvariya (Kalvarija), and Mariyampole.

Olecko-Suwałki Sector:

Trackage: Single track, standard gauge

Average speed: 40 km per hour, including stops

Schedule: 4 passenger trains daily

Suwałki-Trakiszki Sector:

Trackage: Single track, standard gauge

Average speed: 36 km per hour, including stops

Schedule: 3 passenger trains daily

There is no information on the number of trains moving across the border to Shestokai.

Shestokai-Kazle Ruda Sector:

Trackage: Single track, broad gauge

Average speed: 35 km per hour, including stops

Schedule: 1 local passenger train daily

Besides this one line, which connects Poland with Lithuania, the following trains that do not cross the border are currently in operation:

Ketrzyn (Rastenburg)-Wegorzewo (Angerburg):

Trackage: Single track, standard gauge

Average speed: 30 km per hour, including stops

Schedule: 3 passenger trains daily

Ketrzyn (Rastenburg)-Giżycko (Lötzen) Line:

Trackage: Single track, standard gauge

Average speed: 42 km per hour, including stops

Schedule: 5 passenger trains daily

Olecko (Treuberg)-Goldap (Goldap) Sector:

Trackage: Single track, standard gauge

Average speed: 25 km per hour, including stops

Schedule: 4 passenger trains daily

Remarks: This sector was formerly part of the line that extended to Gusev (Gumbinnen) and connected at Goldap with a line that extended to Chernyakhovsk (Insterburg). The Soviet timetables do not list these lines, and it is doubtful that they are currently in operation.

E. The Lake Plain

1. Settlement Pattern

This sparsely settled, heavily forested region is the only section of the entire border area in which large tracts appear to be uninhabited. The northern part of the region is generally cleared and settled by people who live in small farm villages similar to the settlements of the Lake Plateau region. These scattered settlements are connected with each other by poor secondary roads. Small forested areas, swamps, and marshes are intermixed with the cleared areas and would provide coverage and concealment for an intruder (Figures 19, 41, and 42).

The southern section of this region is heavily forested (Figure 30), and the settlements are largely limited to the edges of the forests and to clearings along the rivers and lakes within the forest. A number of these clearings do not appear on the 1:100,000 maps that accompany this report; also, several more extensive clearings have been made on the forest edge than appear on the maps. Although farming is the primary occupation of most of the inhabitants of the Lake Plain, fishing and lumbering are two other means of obtaining a living (Figures 26 and 29). The many large lakes are well supplied with fish, which are caught with nets from flat-bottomed boats.

The population on the Polish side of the border is made up largely of Poles who settled and developed the region centuries ago. These people, living in their isolated farm villages, have been less affected than any other group in the area by the revolutionary changes initiated

by the present Communist-dominated government. Many of them still cultivate their own land and raise their own sheep and flax, from which the women still make homespun material.

The composition of the population on the Lithuanian side of the border is essentially the same as on the Lithuanian side of the Lake Plateau region.

The settlement pattern does not vary much from the Polish side of the border to the Lithuanian side, except that the villages are more numerous and the forests are not so extensive in Lithuania. There are no large towns on either side of the border. Most of the settlements are composed of a few hundred individuals.

Sejny, the largest Polish town in the area, is located about 5 miles from the border and in 1946 had a population of 1,678. On the Lithuanian side of the border are two towns which, on the basis of the 1:100,000 maps, appear to be comparable to Sejny in size. These are Kapčiamiestis, which is located approximately 5 miles from the border, and Pazapsys, only 2 miles from the border.

2. Roads

There are few good roads and no railroads in the Lake Plain region. According to the 1:100,000 map series, the best roads that cross this area are secondary roads, which are classified as metaled and dry-weather roads. Three of these roads cross the border at (1) Kalwiszki, (2) just to the south of Jez Bołonie, and (3) through the center of the northeastern extension of Nadlesn

Pomorskie. They all connect with Lithuanian roads classified as "other main roads." From an analysis of aerial photographs of the border, there does not appear to be any difference in the physical characteristics of these roads on the two sides of the border. The differences on the maps seems to be due to the use of different criteria in classification of the roads. Besides these secondary roads, there are numerous dirt roads, paths, and tracks, which become impassable during rainy seasons.

VI. The Boundary Area

A. Administration

The boundary between Kaliningrad Oblast and Polish-administered East Prussia has not been redefined, so far as is known, since the Polish-Soviet Treaty of August 16, 1945. At that time it was stated that a line would be established north of Braunsberg and Goldap until the final decision on territorial problems was made at the peace settlement.[20/] No provision was made in the Treaty of 1945 for administration or marking of the boundary in East Prussia, and there has been no report of subsequent agreements.

The section of the boundary between Poland and the Lithuanian SSR is covered by the 1948 agreements between Poland and the Soviet Union. These agreements provide for administration and regulation of the boundary and for settlement of disputes and conflicts.[21/ 22/*]

*References 21 and 22 are the only sources for basic information on boundary administration.

The Lithuanian-Polish boundary constitutes one of five sectors along the Polish-USSR boundary. These sectors were established by the 1948 agreements and form the basis for the administration of the boundary and the settlement of disputes. Each sector is under the authority of a boundary commissioner. The Lithuanian boundary comprises the Sejny sector on the Polish side, with the boundary commissioner's permanent residence being in Sejny. On the USSR side it is known as the Maryampole sector, with the boundary commissioner's headquarters in Maryampole.

The provisions for the administration of the boundary are formulated to allow a minimum of movement across the line. No provision is made for day-to-day routine movement across the frontier by inhabitants of the boundary zone. Only boundary officials and certain classes of workmen are permitted to move back and forth across the line, and they do so under strict regulations. Hunters may not pursue game across the line or shoot across the line. Mining and mineral prospecting are prohibited in a strip of land 20 meters wide along the frontier, except by special agreement.

Provisions for navigation and other uses of frontier waterways are likewise extremely detailed and restrictive in nature. Boats are permitted to navigate in frontier waters only by day and must be clearly marked. They are allowed to put in on the bank of the country opposite only when in distress. Nationals of either side may fish in boundary waters only up to the line and only in the daytime. The floating of timber in frontier waters is permitted to both parties, but it is strictly regulated. Workmen of one nationality may land on the

bank of the other country for the purpose of building temporary installations for timber floating. The details of operation of these working parties, however, must be agreed upon in advance by the frontier authorities.

The basic agreements of 1948 state that commerce by railroads, main roads, and waterways intereected by the boundary line and frontier transit points on such routes are to be subject to special agreements between Poland and the USSR. At such transit points, where a major transportation route crosses the boundary, each state is required to erect and maintain proper signs and barriers.

Finally, it is provided that if the frontier or sections of it should be closed to traffic, even the limited crossing rights permitted by the agreement of 1948 will be suspended.

B. Boundary Markers and Barriers

Very little information is available on the marking of the boundary between Kaliningrad Oblast and Poland. In 1947, the Polish and Soviet sections of East Prussia were reportedly separated by a border zone about 10 kilometers wide, from which the population had been evacuated and in which no farming was permitted.[23] The frontier itself is completely closed and is patrolled by frontier guards on both sides.[24] [25] A barbed-wire fence apparently extends along the complete length of the frontier; in 1952 the fence was reported to oe equipped with flares, which burned when the wire connecting them was touched.[26] It is likely that barbed-wire entanglements are

also present along all or most of the border. These frontier barriers probably constitute the only marking of the boundary.

A description of the barriers at an important railroad crossing point between Poland and Kaliningrad Oblast illustrates the extreme security measures prevalent on the border. In May 1951, the following succession of zones was reported at Zheleznodorozhnyy (Gerdauen): first, a cleared area about 300 meters wide; then, nearer the boundary itself, a plowed strip 10 to 15 meters wide, in which wooden watchtowers with searchlights were located at 300-to 400-meter intervals; next a 2-meter-high barrier of barbed-wire rolls and barbed wire strung on cross-pieces; and finally, 3 to 5 meters nearer the line, a high barbed-wire fence strung on wooden poles. These zones existed on both sides of the frontier.[27]

Watchtowers with searchlights are probably spaced along the whole boundary; they appear to be a standard security feature of the Polish-Soviet frontier. The water stretch of the boundary in the lagoon Zalew Wislany (Frisches Haff) is reported to be lighted at night by search-lights from towers on the sandspit Mierzeja Wislana (Frische Nehrung) and on the mainland.[28]

The Polish-Lithuanian SSR boundary, like all the Polish-USSR frontier defined by treaty, is indicated by a cleared strip 10 meters wide (5 meters on each side of the line).*

*References 21 and 22 are sources for the marking of the boundary.

This strip is kept cleared of undergrowth that might obstruct visibility. No buildings except those intended for the defense of the frontier are permitted in the frontier strip, and cultivation is prohibited.

On land the boundary is delimited by a series of boundary markers and is defined as an immovable line running from one marker to the next. These markers consist of two wooden frontier posts, probably about the height of a man, placed at a distance of 2.5 meters from the frontier line, with a small round wooden post or 4-sided stone post between them on the line itself. At principal turning points in the line, a concrete pillar is placed on the line between the usual two wooden posts. At points of crossing from land to water or water to land, two wooden frontier posts and a small wooden post or concrete pillar are placed on one bank of the river or lake, with a third marker post placed on the opposite bank in alignment with the frontier line.

Boundary markers along water sectors consist of two wooden posts placed on opposite sides of the river or lake. On navigable rivers, the frontier line is defined as following the middle of the main channel (thalweg). On unnavigable rivers the frontier follows the middle of the stream or the middle of its main branch. Natural changes in the bed of a boundary stream that would involve shifts in ownership of property or buildings do not change the position of the boundary line except by special agreement.

The frontier markers are numbered in order from south to north. The numbers of only two markers on the Lithuanian-Polish frontier

sector are known; these two are at the north and south extremities of the sector. Marker No. 1987 is located near Gromadczyzna, at the convergence of the boundaries of Poland, the Lithuanian SSR, and Kaliningrad Oblast. Gromadczyzna appears on the accompanying AMS 1:100,000 series in the German form, Gromadtschisna. In the prewar period, Gromadczyzna was a cluster of a few buildings immediately on the boundary between Lithuania, East Prussia, and Poland. Marker No. 1789 is located on the river Marycha, at the junction of the boundaries of Poland, the Lithuanian SSR, and the Belo-russian SSR.

Frontier barriers on the Lithuanian sector are presumed to be similar to those that have been observed on the Polish-USSR border further south.[29/ 30/ 31/ 32/ *] There are probably barbed-wire entanglements or fences along the entire frontier. On the Soviet side watchtowers with searchlights are spaced along the boundary line. The towers are probably about 200 to 250 meters apart, although they may be as widely spaced as 500 meters. Watchtowers along the Polish side are apparently not as numerous. It is likely that along many sections of the frontier there is a belt of plowed land to assist in detecting

*References 29, 30, 31, and 32 give information on border security at various points on the Polish-USSR frontier, but not specifically on the Lithuanian sector. These sources are the basis for statements on frontier barriers. The sources are not in agreement on specific points, such as the spacing of watch towers.

border crossings. The installation of various alarm devices for summoning the frontier guard has also been reported. Polish and Russian frontier guards patrol the border; the Russians are believed to use trained dogs.

Appendix A Linear Description of the Boundary

The boundary between Poland (Polish-administered East Prussia) and Soviet-administered East Prussia (Kaliningrad Oblast) begins on the Baltic shore of the Mierzeja Wislana (Frische Nehrung). The line crosses this sand spit in a straight line running northwest-southeast and reaches the eastern shore at a point about 3 kilometers north of the Polish settlement of Nowa Karczma (Neukrug) (J-14; 10-34).* The line bends to the east at the eastern shore of the sand spit and crosses the lagoon Zalew Wislany (Frisches Haff) in a straight line.

The boundary intersects the mainland at a point about 2 kilometers northeast of the Polish settlement Pasłeka (Passarge) (J-14; 20-33) and just north of the mouth of a small stream that runs northeast of, and parallel to, the stream Pasłeka (Passarge). The boundary continues overland to cross the stream Omaza about 4 kilometers northwest of the Polish settlement Zelazna Gora (Eisenberg) (J-14; 38-29). In the section from the coast to the Omaza, the boundary is crossed by

*The numbers in parentheses are locational keys to the accompanying map series, AMS M651, Poland 1:100,000. J-14 is the sheet number, 10 the index number of the north-south grid line nearest west from the place named, and 34 the index number of the east-west grid line nearest south from the place named.

the Braniewo (Braunsberg)-Kaliningrad (Königsberg) railroad, the Braniewo-Kaliningrad main road, and a secondary road leading from the Polish settlement Lipovina (Lindenau) (J-14; 33-24). The boundary also crosses the stream Bahnau. For a short distance it parallels the Mamonovo (Heiligenbeil)-Tsinten (Zinten) railroad.* The following boundary crossings, in order from west to east, occur:

(1) A road crosses from Żelazna Gora to Mamonovo (Heiligenbeil).**

(2) The main road (a former Reichsautobahn) from the west to Kaliningrad crosses at a point southwest of the Soviet settlement /Tyrowo/ (Dtsch. Thierau) (J-14; 40-33).***

(3) The Omaza loops northward across the boundary near /Tyrowo/, so that the boundary crosses the stream three times.

(4) A road from the Polish settlement Jachowo (Hanswalde) (J-14; 43-28) crosses to /Tyrowo/ and Mamonovo.

(5) Two small streams cross the boundary south of the Soviet settlement (Hermsdorf) (J-14; 46-33).

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*This railroad is not shown on the accompanying map series at 100,000.

**Mamonovo is the most recent Soviet name for this town. In the earlier years of Soviet occupation, the Soviet name appeared as Kheyligenbeyl.

***Soviet names are not available for several of the villages mentioned in the text. In such cases the Polish name, if known, is given in brackets and the old German name is given in parentheses. It is possible that some of the villages in the border area have been depopulated by extensive deportations.

(6) South of Tsinten (Zinten) (J-14; 54-35) the boundary passes just south of the junction point of two railroads — one from the southwest, from the Polish city Orneta, the other from the southeast, from Lidzbark Warminski. From the junction point the railroad runs north to Tsinten.

(7) The main Orneta-Tsinten road crosses just east of the Orneta-Tsinten railroad. In the sector from the coast to the vicinity of Tsinten, the boundary traverses low, open country with only a few scattered patches of woodland. Many small streams and, near the coast, small canals or ditches cross the boundary. Before the boundary was established (1945-46), there were about 10 small settlements in the immediate vicinity, and houses and buildings were distributed with fair uniformity over the land. The boundary zone here and elsewhere along the Polish-Soviet boundary is probably almost uninhabited at present, and it is possible that many of the structures near the line have been removed.

From the road and railroad crossings south of Tsinten, the boundary line continues in a slightly more southerly direction, but still running generally west-east. It extends in a straight line for a distance of about 23 kilometers to a point some 3 kilometers south of the Soviet town Bagrationovsk (Pr. Eylau) (J-15; 77-28). In this 23 kilometer section, the following road crossings occur:

(1) A road from the Polish settlement Kandyty (Canditten) (J-15; 58-20) to Tsinten. Just north of the border, a branch of this

road runs east to the Soviet settlement Rassiten (Rossitten) (J-15; 62-29).

(2) Several secondary roads crossing in the Kamiensko Forest (Forst Preussisch Eylau) sector, which the boundary traverses for about 5 kilometers in the area southeast of Rassiten.

(3) The Olsztyn-Kaliningrad main road crossing southwest of Bagrationovsk. The terrain is considerably more rolling and broken in this sector than to the east. The Kamiensko Forest, through which the boundary runs, occupies high ground easterly from Bagrationovsk, and another large forested tract, apparently a detached part of the Kamiensko Forest, lies on the Polish side of the boundary a short distance south of Bagrationovsk. Prewar settlement in this sector was not quite as dense as to the east, although there were many buildings some distance to the north and south of the immediate boundary zone.

The boundary continues eastward in a straight line for about 16 kilometers, crossing the Bartozyce (Bartenstein)-Kaliningrad (Königsberg) main road and the Bartozyce-Kaliningrad railroad. It intersects the Bartozyce-Pravdinsk (Friedland) railroad near the Soviet settlement Shënbrukh (Schönbruch) (J-15; 92-25). At Shënbrukh the boundary also crosses the Bartozyce-Pravdinsk main road. From Shënbrukh the boundary runs eastward approximately in a straight line for about 27 kilometers to intersect the Olsztyn-Chernyakhovsk railroad and the Olsztyn-Znamensk main road about 4 kilometers south of the Soviet town

Zheleznodorozhnyy (Gerdauen) (J-15; 19-24). In this sector the line crosses the Lyna River about 9 kilometers east of Shënbrukh. The Polish settlement Lipowo (Lindenau) (J-15; 06-22) lies near the boundary about 5 kilometers east of the Lyna.

From the road and railroad intersections south of Zheleznodorozhnyy, the boundary continues in a direction slightly south of east to the town of Nordenbork (Nordenburg) (J-16; 35-22). On the Polish 1:500,000 series, the boundary is shown passing just south of Nordenbork. There is doubt, however, as to which side of the boundary the town is on.33/ *

The boundary sector from Shënbrukh to Nordenbork traverses undulating, open land that is interspersed by small patches of woodland. A fairly large woodland area lies on the Soviet side of the boundary northwest of Nordenbork. A number of building clusters forming small settlements existed near this sector of the boundary in the prewar period.

From Nordenbork the boundary approximates a straight line, bearing slightly north of east, to the northern end of the (Goldaper See) about 5 kilometers north of Goldap. In this long sector there are no towns of considerable size near the boundary, though many small settlements existed in the prewar period. West of Nordenbork the boundary crosses the Kanal-Mazurski, which, with its extensions, connects Lake Rydzowskie in Poland with the Lyna River in Soviet territory. On the

*A sketch map accompanying the source shows Nordenbork on the Polish side of the boundary.

accompanying 1:100,000 series this canal is not shown as crossing the boundary. The boundary also crosses the river Węgorapa (Angerapp) about 8 kilometers south of the Soviet town of Ozersk (Darkehmen) (J-16; 65-31).

Between Nordenbork and Goldap the major road and railroad crossings are as follows:

(1) Węgorzewo-Zheleznodorozhnyy railroad crossing about 4 kilometers east of Nordenbork.

(2) Węgorzewo-Zheleznodorozhnyy main road crossing at (Rauschenfeld) (J-16; 41-22).

(3) Węgorzewo-Ozersk (Darkehmen) railroad crossing about 3 kilometers southeast of the Soviet settlement /Kowary/ (Kowarren) (J-16; 5

(4) Goldap-Ozersk main road crossing northwest of the Polish settlement Mazucie (Masutschen) (J-16; 76-23).

(5) Goldap-Ozersk railroad crossing just east of the main road crossing.

(6) Goldap-Gusev (Gumbinnen) main road crossing about 2 kilometers southeast of the Soviet settlement /Pławiszki/.

(7) Goldap-Nesterov (Stallupönen) railroad crossing just west of the northern end of the (Goldaper See).

From Nordenbork to the Goldaper See the boundary traverses only a few small areas of woodland, mainly in the vicinity of Kowary. There are nearby woodland tracts of considerable size, however, one is in Poland, south of Nordenbork and the Jezioro Nordenborskie (lake),

and a second, also in Poland, is south of the place where Wegorapa River crosses the line. The surface of the land is irregular, and local elevations are fairly high. The boundary passes over high ground east of Nordenbork, descends to the valley of the Wegorapa, then ascends to reach the highest elevation in this sector (about 180 meters) near the Goldaper See.

Leaving the Goldaper See, the boundary extends eastward through a forested area, the Puszcza Romincka (Romintener Heide), for about 23 kilometers to the vicinity of the Polish settlement Zytkiejmy (Szittkehmen) (J-17; 10-25). A branch line of the Goldap-Nesterov railroad crosses the boundary just west of Zytkiejmy. The boundary apparently follows almost a straight course through the forest in a west-east direction. For about 7 kilometers in the central part of the forest, it parallels a road (called the Goldaper-Teerbuden Weg on the 1:100,000 series), the road apparently being in Soviet territory.

From Zytkiemy the boundary extends for about 7 kilometers in a direction slightly north of east. It intersects the Polish-Lithuanian SSR boundary at a point about 3 kilometers southeast of the Lake Vustiter-Zee [J. Wisztynieckie] (Wystiter See).

From the Goldaper See eastward the relief is similar to that along the sector west of this lake. In the western part of the forest the boundary is crossed by several small streams, and there are some cleared land and a few settlements in this area. From the vicinity of Zytkiemy to the Lithuanian boundary the land is open and irregular.

Outside Zytkiemy and two other smaller settlements, houses and buildings are scattered at rather uniform distances from one another.

The boundary between Poland and Kaliningrad Oblast joins the Polish-Lithuanian SSR boundary at a point about 3 kilometers southeast of Vustiter-Zee (Wystiter See) and 5 kilometers west of the Polish settlement of Wizajny (J-17; 21-27). From this point the Lithuanian boundary trends northeast for approximately 4 kilometers. The line then curves around the northern end of Lake Wizajny and extends in a direction slightly south of east for about 7 kilometers. The Lithuanian settlement Grafauskai (J-17; 26-32) lies north of the boundary in this section. The boundary turns southwest for roughly 3 kilometers, then southeast for about 5 kilometers, passing south of the Lithuanian settlement Liubavas (J-17; 32-28). In this section the line is crossed by the river Sheshupe and by a secondary road leading from the Polish settlement Rutkatartak (J-17; 28-23) to Liubavas.

In the sector from the trijunction of Poland, Kaliningrad Oblast, and Lithuania to the Sheshupe there is considerable high ground, and several of the small streams that cross the boundary have rather steep-sided valleys. Drainage in several of these valleys consists of chains of small lakes connected by creeks. There is marshy ground to the northwest of Jez Wizajny and along the Sheshupe. On the Soviet side immediately adjacent to the boundary are several fairly large patches of forest. Between two of these the boundary skirts the southern shore of the small lake, Dunajewo. Settlement and buildings were

rather uniformly dispersed in this sector before the war, Liubavas containing the only sizable cluster of buildings. A network of secondary roads crossed the boundary, and there were apparently open fields in several places along the border.

The boundary parallels the stream Szelmentka, a tributary of the Sheshupe, southwestward to the northern end of Lake Kupowo, passing to the northeast of a forest tract. From this point the line trends southeast for about 4 kilometers, then turns northeast for about the same distance; in this section it crosses the Suwałki-Kalvariya main road. The line runs southward for about 2 kilometers, then turns east near the settlement Trompole (J-17; 42-20), which it apparently passes through. Thence it extends in a direction slightly south of east for 2 kilometers, then southeast for about 5 kilometers. In this section, at a point some 4 kilometers northeast of the Polish settlement Punsk (J-17; 42-16), it intersects the railroad from Suwałki to Maryampole and Alitus.

The boundary follows a slightly curving course eastward to the settlement Berezniki (J-17; 50-16), passes through this settlement, and at this point crosses a secondary road from the Polish town Sejny (K-18; 53-99) to Kalvariya. From Berezniki, the boundary follows an irregular course in a general southeasterly direction to the northern shore of Lake Gaładus, where a road crosses from Poland to the Lithuanian town Lazdiyai (K-18; 64-14). The boundary continues southward through Lake Gaładus for about 6 kilometers, roughly half the length of the lake.

The stream Szelmentka and the lake Kupowo, like the streams lying to the northwest, are in an entrenched valley. After traversing this valley, the boundary passes onto an upland of irregular topography. There are some marshy areas near the line, a small lake lies in an angle of the boundary near the Lithuanian settlement Trompole, and several small tributaries of the Sheshupe drainage system flow across the line into Lithuania. The boundary passes through or near a series of small lakes before reaching Lake Gaĭadus. As in the area to the northeast, buildings were rather evenly distributed in the prewar period and there was a dense network of secondary roads, many of which crossed the boundary.

From Lake Gaĭadus, the boundary turns eastward on land to intersect a secondary road leading from Sejny to Lazdiyai. From the point of intersection with this road, the line curves southeastward, passing southwest of the Lithuanian settlement Janoslavas (K-18; 62-07). The small lake Hozny lies on the Polish side. The Sejny-Lazdiyai main road crosses the boundary a short distance northeast of this lake. The boundary continues in a southerly direction, and after crossing the small lake Boĭoni it intersects the Suwaĭki-Alitus main road east of the Polish settlement Berzniki (K-18; 61-97).

The irregular terrain characteristic of the boundary zone to the northwest of Lake Gaĭadus continues southeast of that lake to the vicinity of the Lithuanian settlement Kuciumai (K-18; 64-02), south of which elevations are lower and the surface is smoother. Southeast of

Lake Galadus the prewar buildings were grouped more definitely into settlements than to the northwest.

From the intersection with the Suwalki-Alitus road, the line extends southwestward through a forested area for a distance of about 8 kilometers along a secondary road running south from the Lithuanian settlement Klepociai (K-18; 69-02).

In this forested tract the boundary road is crossed by a road extending southeastward from Sejny by way of Berzniki in Poland to Kapciamiestis (K-18; 74-88) in Lithuania.

The boundary meets the Marycha River at a point some 4 kilometers southeast of the Polish settlement Zelwa (K-18; 60-91) and follows the course of the Marycha for a distance of about 7 kilometers, to the point of intersection of the boundaries of Poland, the Lithuanian SSR, and the Belorussian SSR southwest of the Lithuanian settlement Grickavas (K-18; 68-85). Here the land is cleared, and in prewar times buildings were spaced rather closely along both banks of the Marycha in this sector, but on ooth the Polish and Lithuanian sides there are extensive forested tracts within a short distance of the stream. On the Polish side these tracts are part of the large forest Puszcza Augustowska. The valley of the Marycha, where followed by the boundary, and the areas to east and west lie at lower elevation than the boundary zone to the north, and the land is fairly flat.

Appendix B. List of Airfields

Name	Coordinates	Location
Elblag (Elbing)	54°08'N 19°26'E	2 miles SE of Elblag (Elbing)

Comment -- Irregular shaped grass field suitable for limited use by conventional fighters; operated by Polish Air Force.

Orneta (Wormditt)	54°08'N 20°06'E	1-3/4 miles NW of Orneta (Wormditt), 27 miles ESE of Elblag (Elbing)

Comment -- Macadam-surfaced concrete being developed for use by jet fighters; operated by Polish Air Force.

Ketrzyn (Rastenburg)	54°03'N 21°25'E	2-1/4 miles SE of Ketrzyn (Rastenburg)

Comment -- Concrete runways, but facilities largely destroyed in 1944. Not in use as of February 1952, but could be developed as a fighter base.

Baltiysk/Noytif (Pillau/Neutief)	54°37'N 19°53'E	2-3/4 miles SSE of Baltiysk (Pillau) on E side of Mierzeja Wislana

Comment -- Concrete runways, used for pilot training; a potential jet-fighter base, adjoining the sea-plane base of the same name.

Baltiysk/Notif (Pillau/Neutief)	54°38'N 19°53'E	1-3/4 miles SSW of Baltiysk (Pillau)

Comment -- The only important seaplane station in the border area; has been developed in conjunction with the naval and shipbuilding activities in Baltiysk (Pillau).

Mamonovo (Heiligenbeil)	54°28'N 19°58'E	3/4 mile NE of Mamonovo (Heiligenbeil)

Comment -- Sod field with excellent facilities, used for training and reconnaissance, but could be improved for jet-fighter use.

Name	Coordinates	Location
Kaliningrad/Zeyerappen (Seerappen)	54°44'N 20°17'E	8-3/4 miles W of Kaliningrad, 1 mile SE of Zeyerappen (Seerappen)

Comment — Macadam or concrete surface runways, probably completed to accommodate jet fighters, which have been reported here.

Kaliningrad/Provehren (Königsberg/Prowehren)	54°46'N 20°24'E	5 miles NW of Kaliningrad, just NW of Provehren

Comments — Concrete runways make this one of the best fields in the border area; probably a jet-fighter base, TU-4's having been reported.

Kaliningrad/Gwr'yevsk (Königsberg/Neuhausen)	54°47'N 20°37'E	8 miles NE of Kaliningrad, just NNE of Gwr'yevsk

Comment — Sod field reportedly used by fighters and twin engine bombers, and may be used by jets.

Kaliningrad/Devau (Königsberg/Devau)	54°43'N 20°34'E	2-1/2 miles ENE of Kaliningrad, just S of Devau

Comment — Poorly drained sod field used by civilian flights, for training, and for fighters.

Kaliningrad/Gutenfeld (Königsberg/Gutenfeld)	54°40'N 20°39'E	6 miles ESE of Kaliningrad, 1-1/4 mile N of Gutenfeld

Comment — Sod field with excellent facilities; used as a fighter and light-bomber base; a potential jet-fighter base.

Kaliningrad/Yezau (Königsberg/Jesau)	54°34'N 20°36'E	11 miles SSE of Kaliningrad, 1 mile N of Yezau

Comment — Surface probably macadam; reportedly used for assembling and testing jet aircraft.

Zheleznodorozhnyy (Gerdauen)	54°24'N 21°19'E	2-1/2 miles N of Zheleznodopozhnyy (Gerdauen); 9-1/2 miles SSE of Allenberg

Comment — Hard-surfaced, potential jet-fighter or light-bomber base.

Name	Coordinates	Location
Chernyakhovsk (Insterburg)	54°37'N 21°48'E	1-1/2 miles S of Chernyakhovsk, 3/4 mile S of RR marshaling area

Comment -- Concrete runway, used by 100 or more single-engine fighters and twin-engine bombers; has also been used for transport and paratroop training.

Mariampole	54°34'N 23°23'E	1-1/2 miles ENE of Mariampole

Comment -- Sod field, current use unknown but a potential fighter base.

Appendix C. Waterways in the Border Area

Pregl' River (see p. 10).

Steamships sail the Pregl' and Deime Rivers on a daily schedule between Kaliningrad (Königsberg), Poliesk (Labiau), and Sovietsk (Tilsit), north of the border area.[34]

Leave	Time	Arrive	Time	Arrive	Time
Kaliningrad	0900	Poliesk	1515	Sovietsk	2300
Sovietsk	1000	Poliesk	1640	Kaliningrad	2300

Kaliningrad (Königsberg) Ship Canal

Width : 157 feet

Depth : 26 feet

Bottom: Sandy and mucky

Despite icebreakers the canal is frozen over in January and February. The ship canal and channel at Baltiysk (Pillau) serves as the only outlet from the Zalew Wislany (Frisches Haff), but because its use by Polish ships is restricted, the Poles are currently digging a second channel west of Elblag (Elbing).[35]

Masurian Canal (from Pregl' River to Masurian Lakes)

Width : 60-82 feet

Depth : 6.5-9.8 feet

Bottom: Sandy and mucky with some gravel

The Masurian Canal connects the Masurian Lakes to the lower Lyna (Alle) River. It is 31 miles long, has a total fall of 11 feet, and includes 10 sluice gates. This is a freight canal; but its current status and use are unknown.[36]

Masurian Lakes

Passenger steamships formerly sailed the Masurian Lakes, but present schedules are unavailable. Navigation of the lakes is under the direction of the Branch Control Office of the Directorate of Inland Waterways at Girzysak (probably Giżycko [Lötzen]). The office has 1 control vessel, 2 small tugs, and 6 to 8 barges of 50 tons each at its disposal.[37]

The Masurian Lakes are joined by a series of navigable rivers and channels to the Augustowski Canal south of the border area.

Augustowski Canal

Length: 63 miles

Width : 65 feet

Depth : 5 feet

South of the border area.

Appendix D. Communications and Power Lines

The extent and condition of high lines in the border area is unknown, but the prewar communications system is believed to have been largely destroyed and not replaced. Field telephones are utilized by the military units north of the Zalew Wislany (Frisches Haff), and there are apparently no civilian communications in the previously well-developed coastal area west of Kaliningrad (Königsberg).[38/]

Appendix E. Note on Maps of the Boundary

The source used for tracing the boundary line, shown in red on the accompanying map sheets (Army Map Service Series M651, 1:100,000), is the Mapa Polski, 1:500,000, published by the Wojskowy Institut Geograficzny (Polish Military Geographic Institute), in 1947. The red line therefore is not to be considered accurate to the scale of 1:100,000. The textual description of the line also is based on the Polish 1:500,000 series, but was prepared for use with the accompanying AMS Series M651 sheets.

Large-scale maps of the boundary are not available. So far as is known, the line between the Soviet and Polish zones of administration in East Prussia has not been demarcated, nor is there an official description of the line other than the section of the Polish-Soviet Treaty of 1945, which states that the line is to pass north of Braniewo (Braunsberg) and Go/dap (Goldap).

The Lithuanian SSR sector of the boundary apparently has been altered only slightly from the prewar line between Poland and Lithuania. This prewar line appears on the AMS 1:100,000 series, the source being 1:100,000 maps of the Polish Military Geographic Institute dated 1929 and 1931. The red line on the accompanying map sheets has been slightly altered to conform to the Polish 1:500,000 series. The complete Polish-USSR boundary, including the Lithuanian SSR sector but not the boundary in East Prussia, was surveyed and demarcated by

the Mixed Polish-Soviet Commission in 1947, and demarcation maps and documents were signed on 30 April 1947. It has not been possible to obtain copies of these maps and documents.

Appendix F. Evaluation of Maps on the Basis of Aerial Photographs

The latest aerial photography available for the Polish/ RSFSR-Lithuanian SSR border area consists of captured German material. Most of the border is covered by stereoscopic vertical photography t aken during the summer of 1944, but for the section between 20°25'E and 20° 56'E the only available coverage consists of German mosaics compiled from photographs dated 1935-37.

Selected stereoscopic coverage of a strip along the present border 3 to 4 miles wide on each side, at scales ranging from 1:12,000 to 1:40,000, and mosaics at 1:25,000 were compared with sheets of 1944 AMS M651 series (Poland, 1:100,000) entitled Braunsberg, Konigsberg, Insterburg, Kalvarija, and Drusieniki. The latter were compiled from German, Polish, and Lithuanian maps dated 1937 and earlier, before the German photography was available.

Comparison reveals the maps in general to be adequate for field purposes, although there is considerable variation in accuracy among the sheets. The most inaccurate are the Kalvarija and Drusieniki sheets, but all sheets fail to reflect changes in the secondary road net and the vegetation pattern. Many areas shown as wooded are now cleared, and areas appearing as wooded in the photographs are not so indicated on the maps. The specifications for the maps do not call for the locations or patterns of cultivated fields to be shown.

An annotated set of the photographs, having geographical notations and showing discrepancies with map information, is on deposit in the Geography Division, ORR, together with a plotted index. Salient new details that appear on the photographs follow, arranged by the map sheet titles and numbers.

Braunsberg (Sheet J-14)

Photography: GX 18604, exposures 365-367, 374-383.

Mosaic DT/PM 1 (a) 15/83, 15/84.

1. A housing development of approximately 300 houses extends along the entire western side of the road between Rosenberg* and Mamonovo (Heiligenbeil).

2. One-half mile south of Mamonovo (Heiligenbeil) is a warehouse or barracks area, with 6 buildings about 200 feet long and others under construction. A development of 25 houses is adjacent.

3. One mile northeast of Mamonovo (Heiligenbeil) is an airport with administration buildings, barracks, hangars, and related buildings.

4. One-half mile east of Mamonovo (Heiligenbeil) and just south of the airport is an area containing repair shops, barracks, and several other buildings.

*Many names on sheets J-14, J-15, and J-16 are given here as they appear on the sheets because present names are unknown.

5. A railroad extends southeast from Mamonovo (Heiligenbeil) through Rehfeld, Dtsch. Thierau and Hermsdorf to Tsinten (Zinten). One spur leads to the Mamonovo (Heiligenbeil airport hangars, another to the repair shop area south of the airport.

6. There is a new railroad from Tsinten (Zinten) east to Schmoditten.

7. One-half mile south of Braniewo (Braunsberg) is a new area of activity consisting of 30 houses and 20 large storage-type buildings served by two railroad spurs.

8. One-half mile south of Tsinten (Zinten) is a small marshaling yard.

9. Many more roads and cleared areas appear on the Mierzeja Wislana (Frische Nehrung).

Königsberg (Sheet J-15)

Photography: GX 2184A, exposures 788-791; GX 2184B, exposures 250, 251; GX 16773, exposures 59-65. Mosaics DT/PM 1 (a) 15/88, 15/89, 16/88 thru 16/93.

1. Zheleznodorozhnyy (Gerdauen) has two new housing developments of about 50 houses each.

2. The railroad extends from Tsinten (Zinten) east to Rassiten (Rositten) and Klaussen and connects with the main line at Schmoditten. Construction was under way in 1936 and completed by 1944.

3. A marshaling yard is at Rassiten (Rositten).

4. One mile northwest of Klaussen is an area of about 20 large storage-type buildings, with 20 smaller buildings, probably barracks, adjacent to the north.

5. A probable ammunition storage area, with 60 or more dispersed buildings, some revetted, occurs in the extensive wooded area midway between Rassiten (Rositten) and Klaussen.

Insterburg (Sheet J-16)

Photography: GX 16773, exposures 47-59; GX 16778, exposures 439-450. Mosaics DT/PM 1 (a) 16/94 thru 16/99.

1. One mile northeast of Goldap (Goldap) is a residential area of approximately 100 houses.

2. The Masurian Canal (Masurischer Kanal) has been extended from Wilhelmshof (54°26'N, 21°22'E) at least as far southeast as Bajohren (54°18'N, 21°30'E), the limit of photographic coverage studies. The stream patterns and swamps in the vicinity of this canal have changed.

Kalvarija (Sheet J-17)

Photography: GX 16777, exposures 351-358; GX 16778, exposures 450-469; GX 19022, exposures 29, 30, 124-127; TUGX 404, exposures 376-379. Mosaics DT/PM 1 (a) 15/102, 15/103, 16/100 thru 16/104, 17/104, 17/105.

1. The road pattern on this sheet is incomplete and highly inaccurate. Many roads are not indicated at all, others

are shown as paths, and many paths are shown on the map as roads.

2. The vegetational pattern is inadequately presented; there are 50 or more cleared areas of various sizes scattered through Puszcza Romincka (Romintener Heide); other cleared areas are shown on the map as wooded, and vice versa.

3. Several small lakes and many minor streams and swampy areas are not indicated on the map.

Drusieniki (Sheet K-18)

Photography: GX 19032, exposures 281-283, 561, 562; GX 19033, exposures 646, 647; TUGX 404, exposures 378-380; TUGX 437, exposures 9, 11; TUGX 438A, exposure 883; TUGX 439, exposures 857, 859; TUGX 421, exposures 531-533. Mosaics DT/PM 1 (a) 18/106, 19/106, 20/106.

1. The sheet is highly inaccurate for the area from the Junction of the Lithuanian SSR-Polish-Belorussian SSR Borders northward along the Polish Border approximately 10 miles. Many roads, clearings, and streams are not shown on the map.

2. The road pattern indicated on the map is incomplete and unreliable throughout the whole vicinity of the border.

3. The map does not show a large swamp 1 mile east of Witkowo-Podlaski (54°06'N, 23°30'E), nor are smaller swamps, small streams, and lakes shown.

4. The woodland pattern is inaccurately represented. Fifty or more clearings scattered through Nadlesn Pomorskie, as well as other cleared areas, are not shown.

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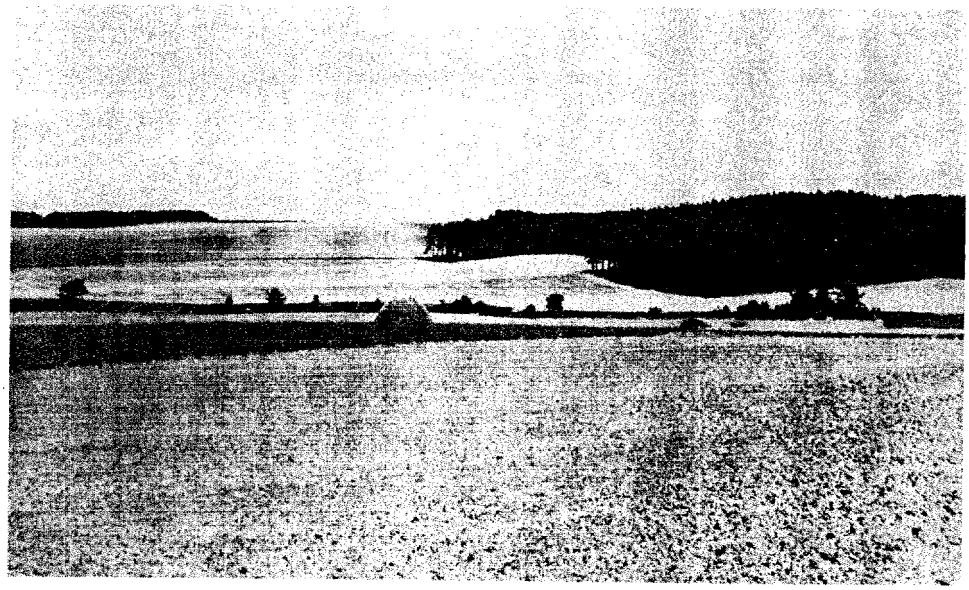

Figure 1. Broad fields planted in potatoes or rye, and carefully tended pine woodlots are typical of the Interior Plain.

Figure 2. Most of the gently rolling uplands are intensively farmed, and woodlots are small and scattered.

Figure 3. Pine-forested sand dunes and marshy shoreline of the Mierzeja Wiślana (Frische Nehrung) near Narmeln (54°28'N, 19°40'E).

Figure 4. Looking south toward Łysica (Kahlberg) (54°23'N, 19°27'E), on the eastern shore of Zalew Wislany (Frisches Haff).

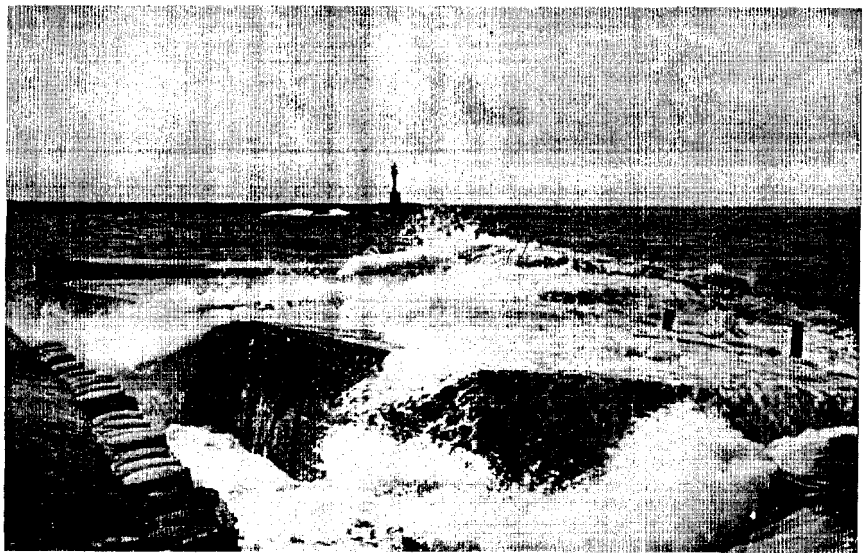

Figure 5. View on the Baltic Coast looking south across Baltiysk (Pillau) ship channel (54°38'N,19°52'E).

Figure 6. Boulders are common on the sandy clay-loam soils of the uplands, where rye is one of the main crops.

Figure 7. Farm workers cultivating potatoes on a former large estate which has undoubtedly been converted into a kolkhoz or sovhoz. Crosscountry movement through areas such as this will attract attention of farm workers.

Figure 8. Thin-stemmed alders, oaks, and willows grow in swampy areas.

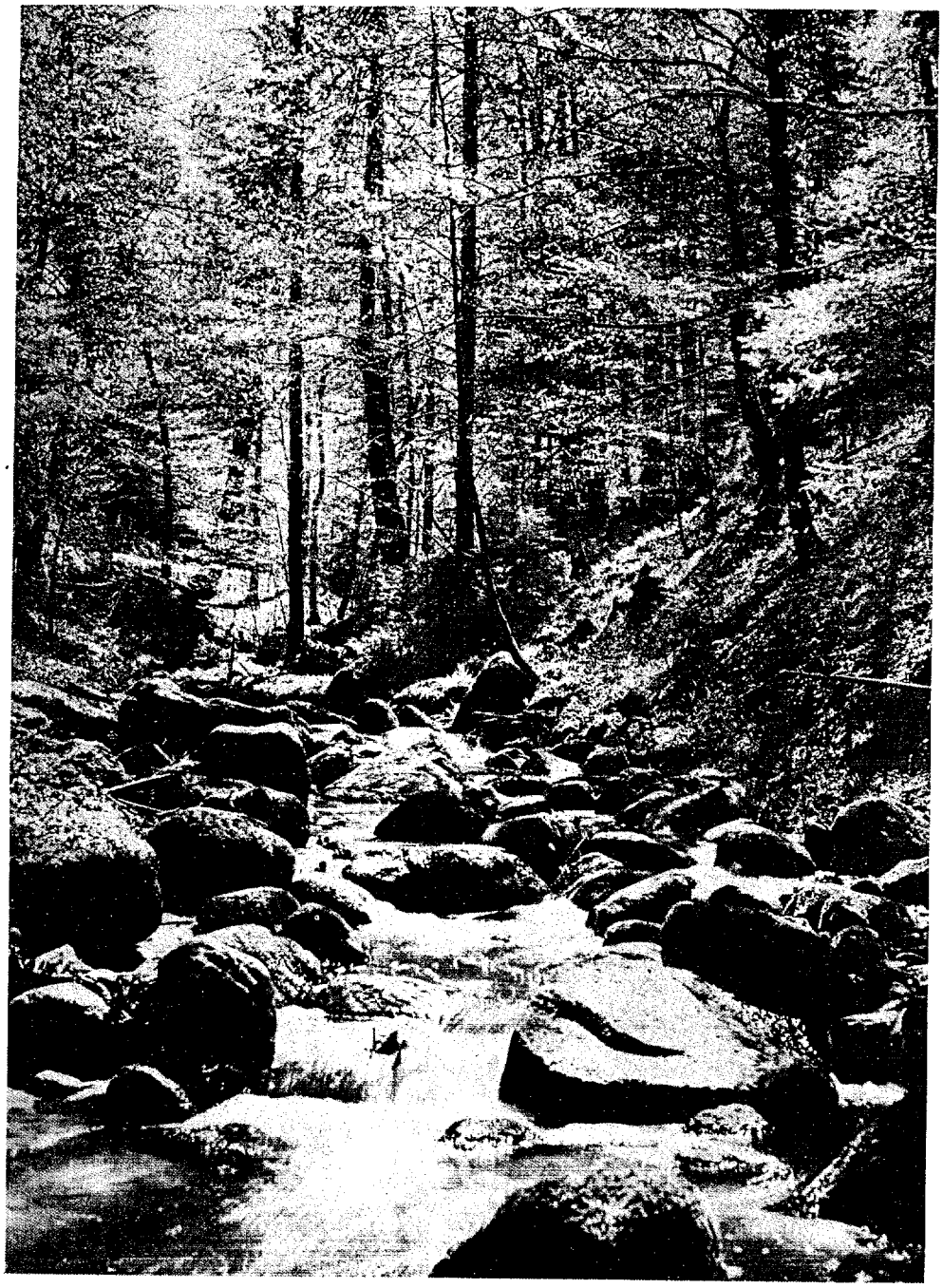

Figure 9. A rocky gorge and predominantly broadleaf forest in the Wyzna Elblaska (Elbingerhöhen) (54°17'N,19°30'E).

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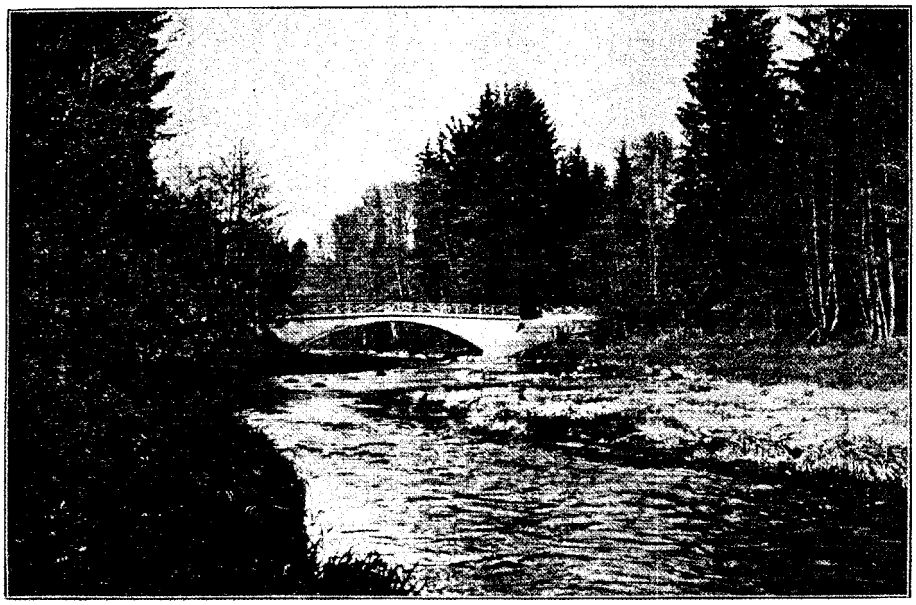

Figure 10. The Walsch River, a small forest-bordered stream, which flows south from the Dzikowo Iławeckie (Schlossberg), in the Kamiensko (Stablack) (54°20'N, 20°23'E).

Figure 11. Large flat-bottomed boats are common form of transportation along the often-flooded lowland streams. Knee-length boots worn by the boatman are of leather.

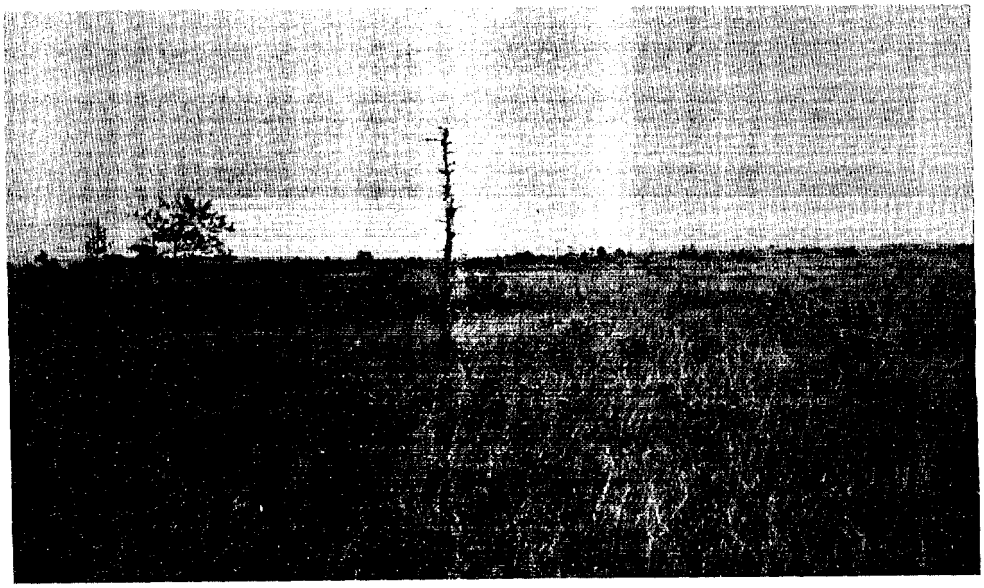

Figure 12. Heather, sedge, and stunted pine form a tundralike bog in the Zehlau Bruch (54°30'N,19°55'E).

Figure 13. Scotch pine, open water, and sedge near the center of the boggy Zehlau Bruch (54°30'N, 19°55'E).

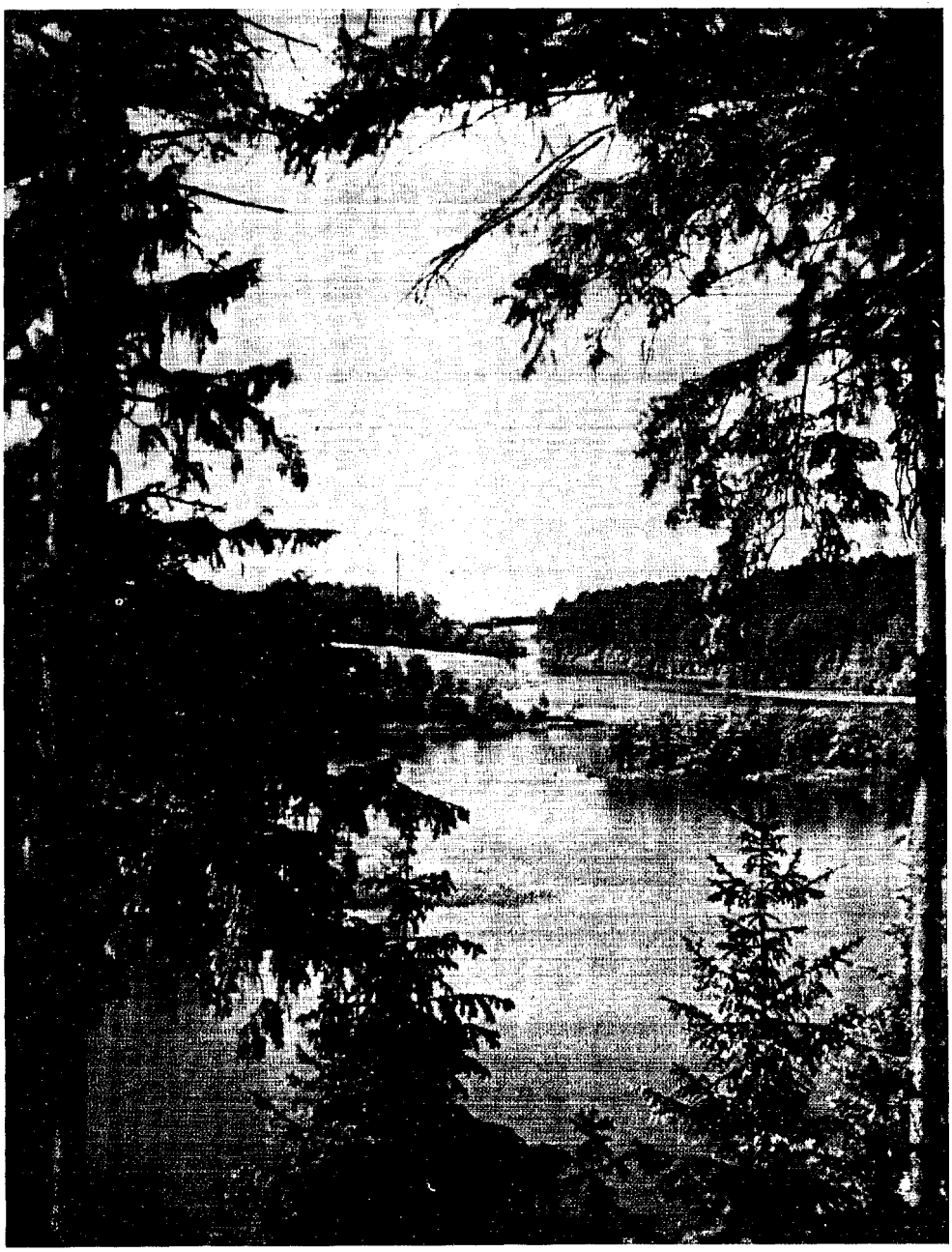

Figure 14. Spruce forests along the Lyna (Alle) River.

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Figure 15. Hilly farmland at southern edge of pine and larch forest in the Puszcza Romincka (Romintener Heide) (54°21'N,22°35'E).

Figure 16. Oak predominates over pine and juniper in an open broadleaf forest.

Figure 17. Sandy forest paths wind through thick undergrowth in mixed coniferous and broadleaf forests. Note clothing of family.

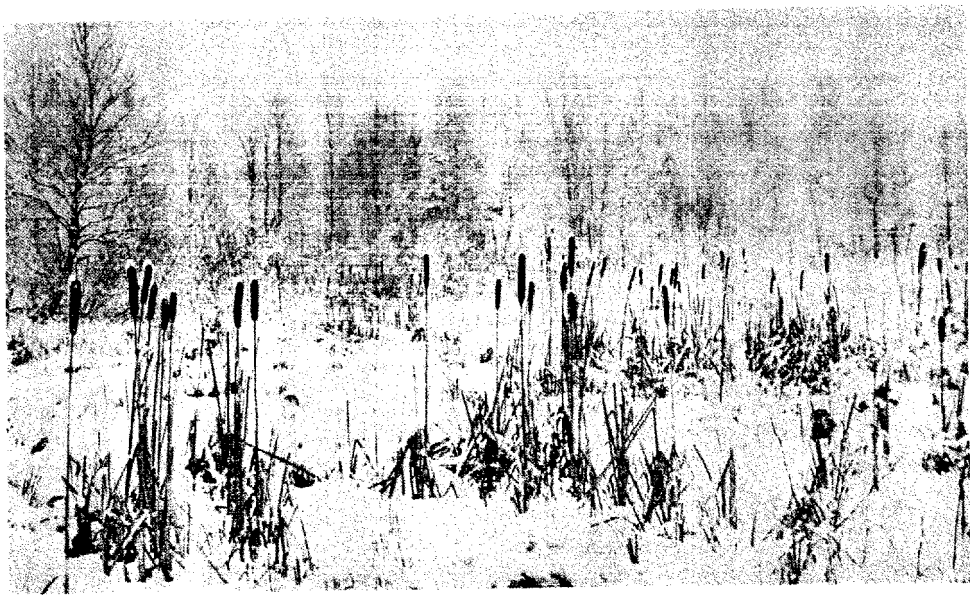

Figure 18. Cattails and coarse sedge grow in small marshes surrounded by broadleaf trees.

Figure 19. In marshy meadows along easily flooded river banks, haystacks must be raised on wooden platforms.

Figure 20. Reeds fill in the old excavations in a peat bog. Recently dug peat is stacked to dry.

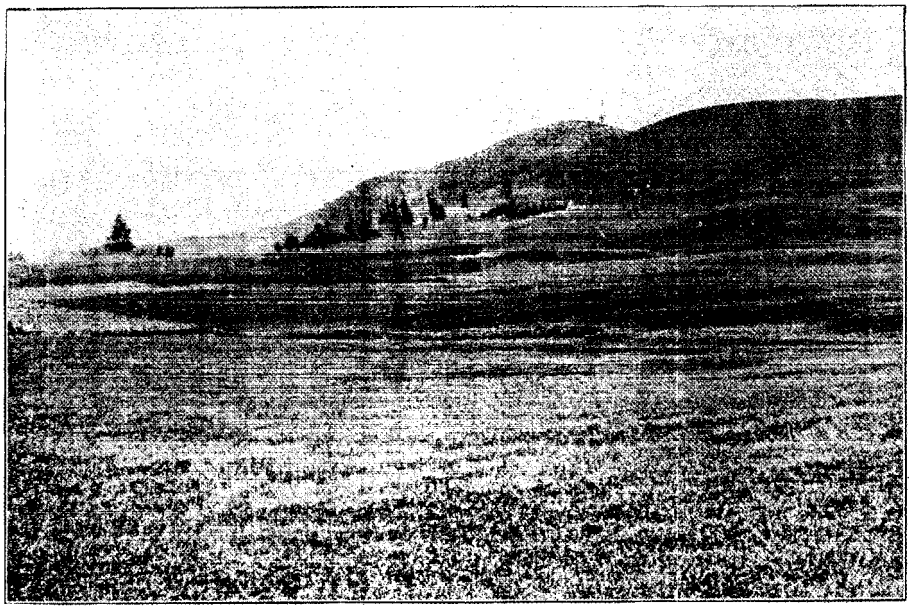

Figure 21. Szeskie Wzgórza (Seeskerhöhen) near Goldap (Goldap) (54°17'N, 22°23'E). Part of this upland attains 1,000 feet in elevation.

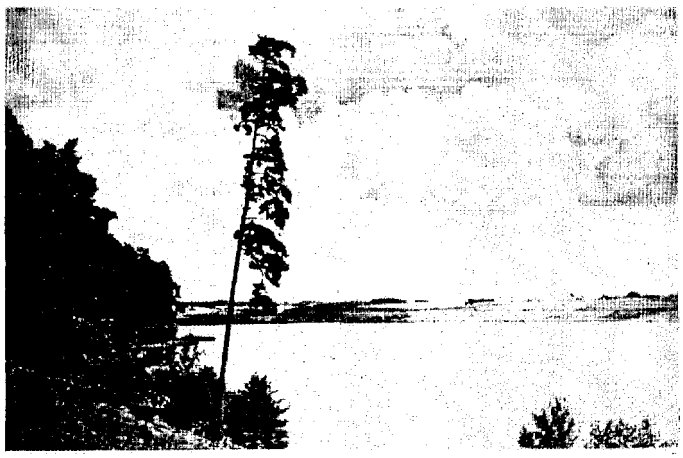

Figure 22. The border passes around the north shore of Goldap Lake in the Lake Plateau Section (54°20'N,22°21'E).

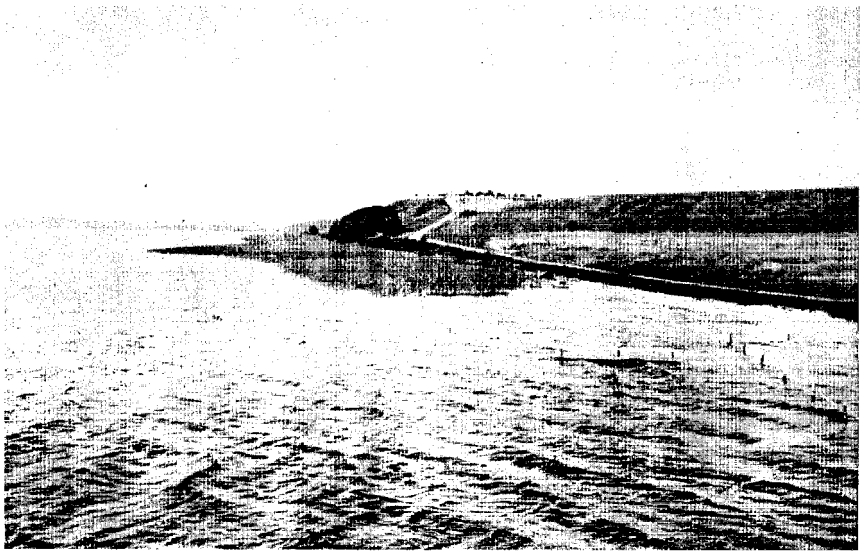

Figure 23. Open marshy shores and terraces along the northern edge of Masurian Lakes near Węgorzewo (Angerburg) (54°13'N,21°44'E).

Figure 24. Irregular, pine-forested southern edge of Masurian Lakes near Giżycko (Lötzen) (54°02'N,21°46'E).

Figure 25. Narrow, steep-banked finger lakes are aligned generally north-south on the Lake Plateau and Lake Plain.

Figure 26. The lakes are extensively fished, using nets through the ice in winter and boats in summer.

Figure 27. Sand roads become deeply rutted and impassable in wet weather.

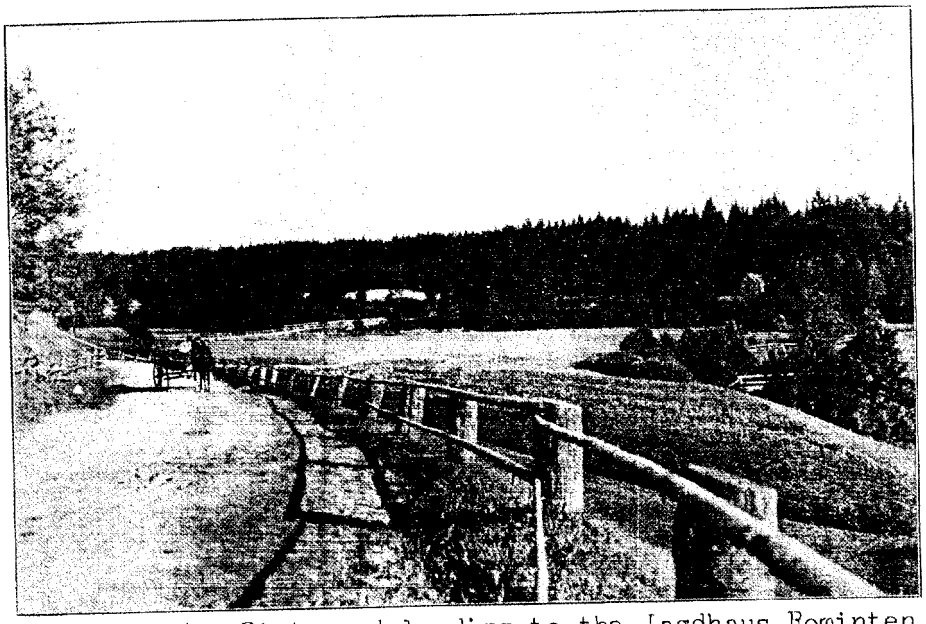

Figure 28. Dirt road leading to the Jagdhaus Rominten in the valley of the Rominte River, Puszcza Romincka (Romintener Heide), (54°22'N, 22°32'E).

Figure 29. Pine timber is hauled by sledges in winter and carts in summer. Pine woods are notably free of underbrush.

Figure 30. Tall, high-branched pine forests and scant underbrush allow easy movement and provide good cover in all seasons.

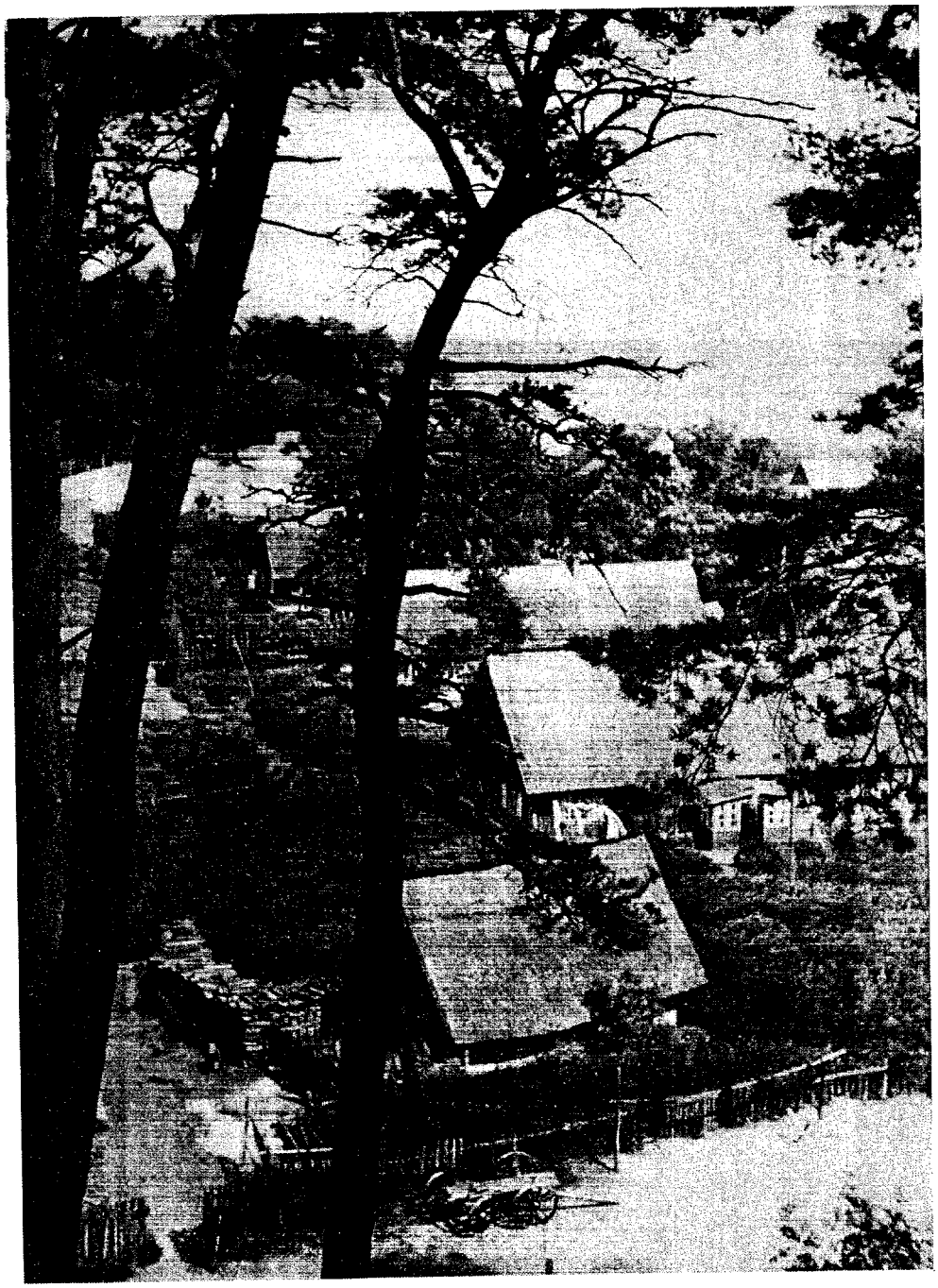

Figure 31. A fishing village in the shelter of the pines in the Mierzeja Wislana (Frische Nehrung).

Figure 32. Barn and farm buildings of a former large estate, which has undoubtedly been converted into a kolkhoz or sovhoz.

Figure 33. Typical isolated farmstead located in the middle of the farmer's land.

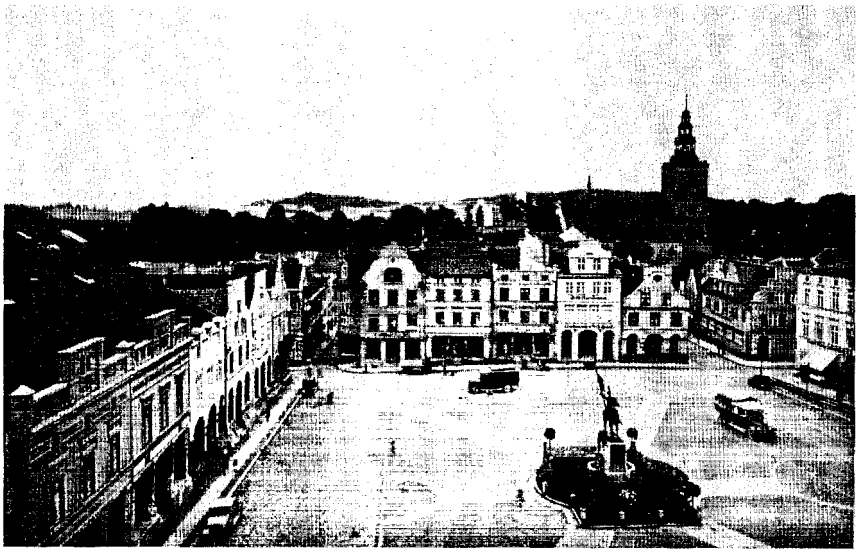

Figure 34. Rectangular market place of Górowo Iławeckie (Heilsberg) (54°17'N, 20°30'E).

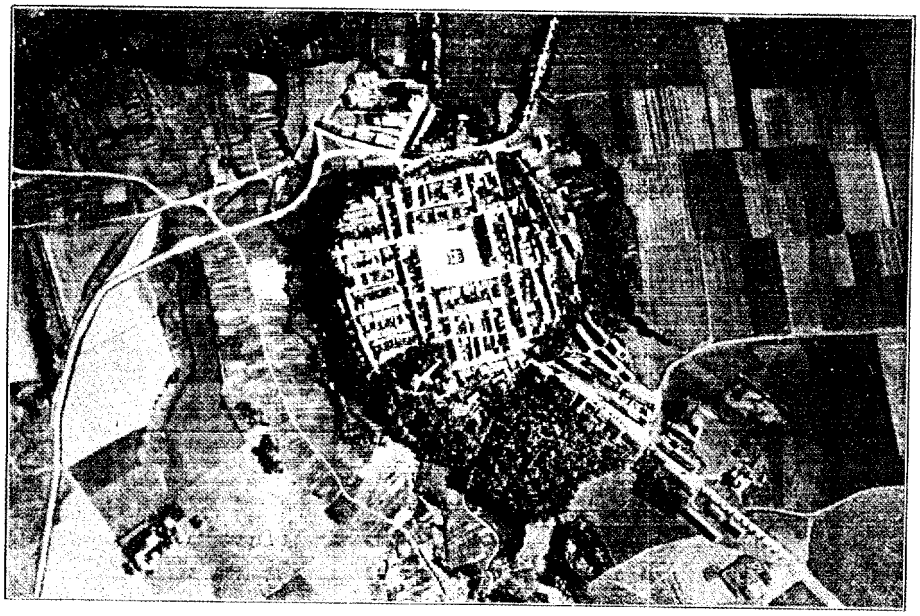

Figure 35. Aerial view of Kreytsburg (Kreuzburg) (54°30'N, 20°28'E).

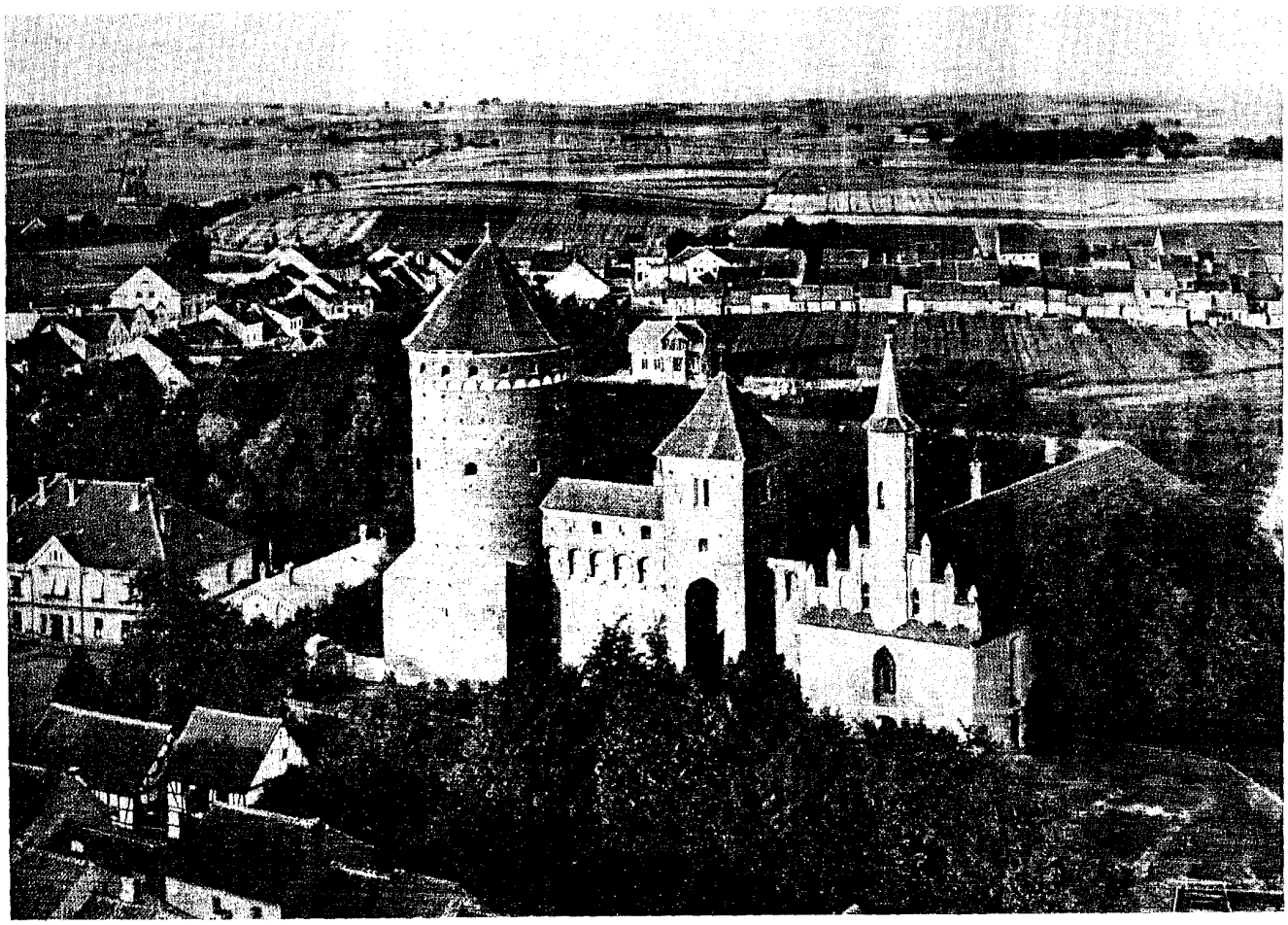

Figure 36. View of Reszel (Rossel) (54°03'N, 21°09'E), showing the rectangular street pattern and the expanse of cleared fields in the background.

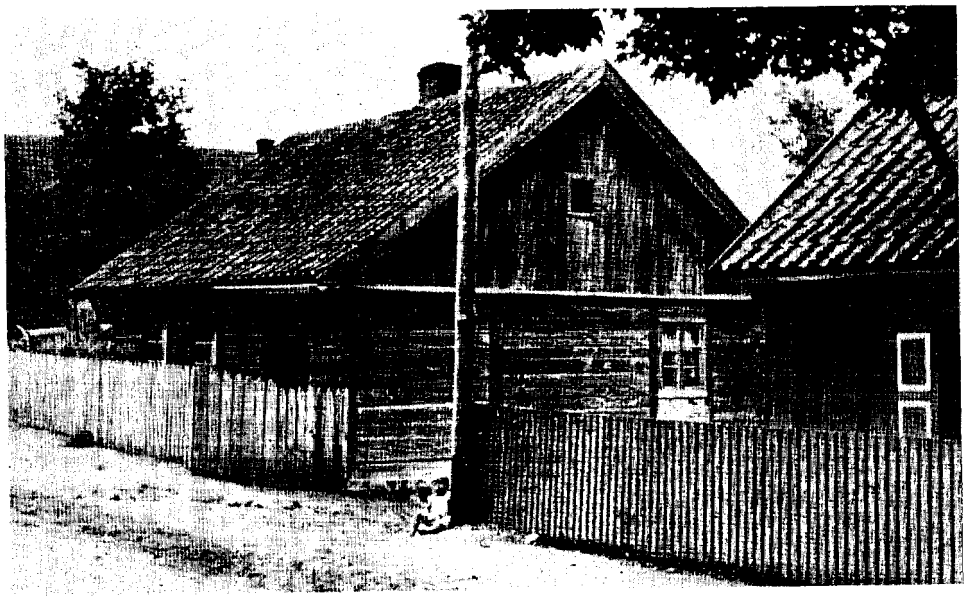

Figure 37. Log cabins lining a single street form the typical settlement pattern of the fishing villages along the shores of the Masurian Lakes.

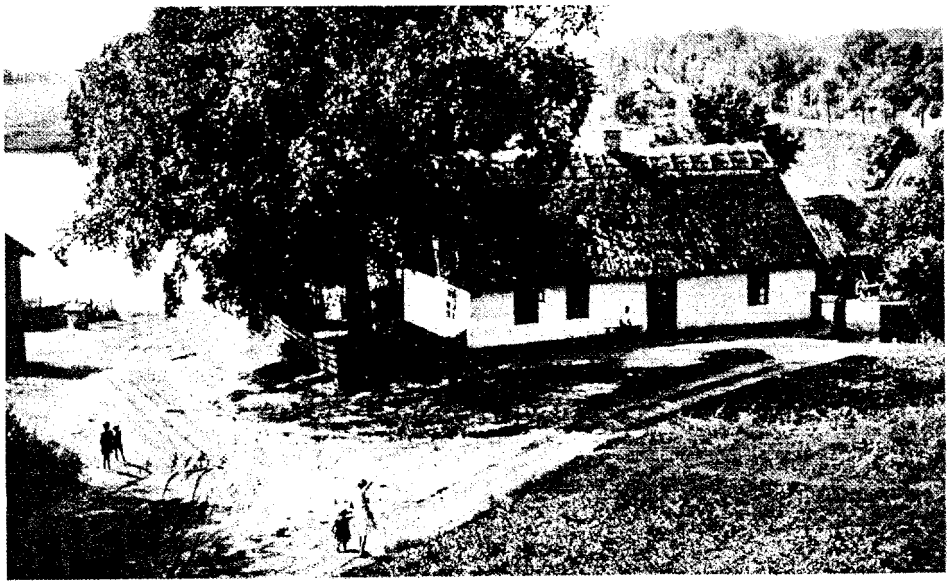

Figure 38. A village inn in one of the many settlements that dot the shores of the Masurian Lakes.

Figure 39. Rebuilt houses at Giżycko (Lötzen) (54°02'N, 21°46'E), 1948.

Figure 40. Market place at Ozersk (Darkehmen) (54°24'N, 22°01'E)

Figure 41. Fish nets are often set up along the reedy shores of the large irregular lakes of the border area.

Figure 42. Lowland farms and fields are flooded in the spring.

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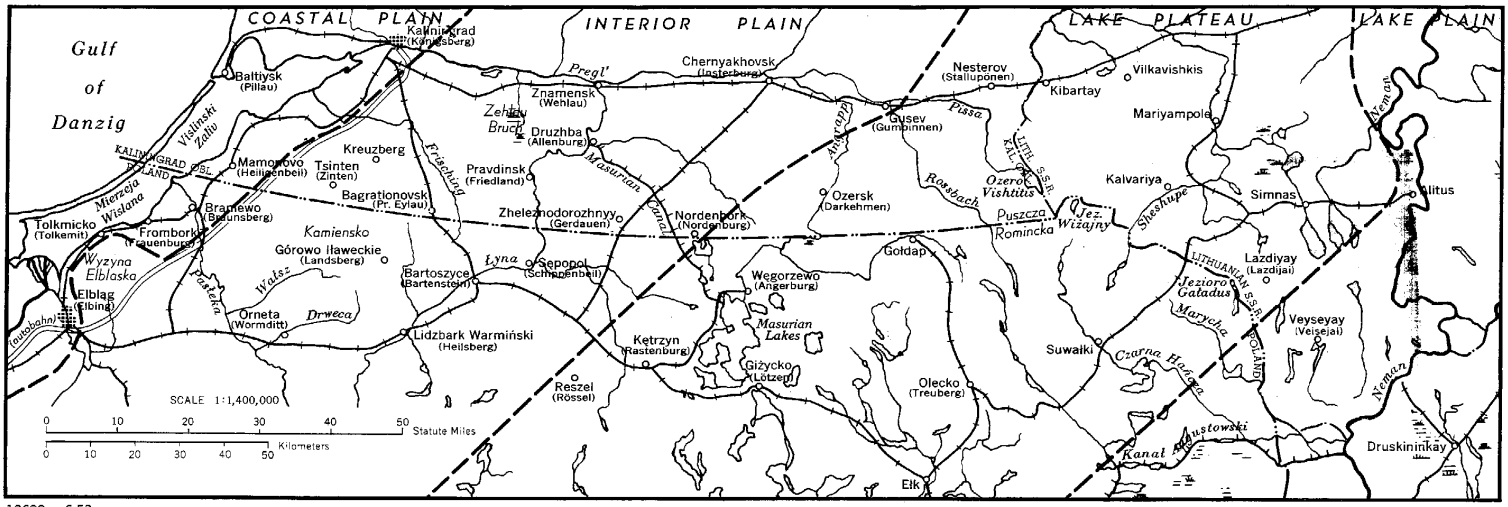

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