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GEOGRAPHIC INTELLIGENCE REPORT

GEOGRAPHIC EVALUATION OF THE TEVLI-IVATSEVICH RAILROAD SECTOR

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TEVLI-IVATSEVICH RAILROAD SECTOR

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Accompanying Material

- 4 Vertical Photographic Mosaics with Overlays
- 9 Area Location Maps at 1:25,000

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GEOGRAPHIC EVALUATION OF THE
TEVLI-IVATSEVICH I RAILROAD SECTOR

A. Introduction

The purpose of this study is to evaluate those physical, cultural, and social features along the Tevli-Ivatsevichi sector of the Brest-Moscow railroad [REDACTED]

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[REDACTED] The railroad sector extends for 89 kilometers (55 miles) along the trunkline from Tevli to Ivatsevichi. The study area covers a strip 2 kilometers (1.2 miles) wide on each side of the railroad. Administratively, it falls within the territorial limits of Kobrinskiy, Pruzhanskiy, Berezovskiy, and Ivatsevichskiy Rayons of Brestskaya Oblast'. According to a recent report by a Western diplomat, however, some of the land adjacent to the railroad -- or even a slice of the sector itself -- may be returned to Poland as part of a proposed territorial exchange with the Soviet Union. The proposal calls for the return to Poland of a strip of Soviet territory, including the rayon centers of Kamenets and Pruzhena, in exchange for Polish territory around the powiat center of Augustów on the Lithuanian border. This move may have been motivated by the Soviet desire to establish a direct railroad connection from Grodno to Kaliningrad across Soviet territory.

The study is a geographic analysis of the area, with particular emphasis on transportation facilities and military installations. The information presented is based on data obtained from large-scale

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previous Polish and Soviet maps, German PW reports, German photography taken during the latter part of World War II, and recent [REDACTED] 25X1C U.S. travel reports. Detailed evaluations of physical, cultural, and military features in the area are based on analysis of German photography by the Photo Interpretation Division. The accompanying vertical photographic mosaics at large scale are provided with overlays that identify in detail the physical and cultural features of the area.

B. General Summary of the Area

The Tevli-Ivatsevichi Area is part of a glacial outwash plain, generally referred to as a transition area between the Volkovysk Uplands of the Belorussian Ridge to the north and the vast southern lowland and flood plain centered around the basin of the Fripyat River. The nearly level surface contains numerous shallow depressions where water collects, forming swamps or ponds. As a whole, the area is inadequately drained by its small sluggish meandering streams and the supplementary drainage ditches. Much of it is subject to seasonal flooding. Soils vary from sandy and clayey in the cultivated areas to mucky in the swamps. Large blocks of carefully tended forest cover the higher areas where the soil is coarser. In the somewhat lower areas the forests first grade off into scrub and brush and then into grass and swamp. The climate of the area is transitional. During the summer the maritime climate of the Baltic Sea Area prevails, and during the winter the continental climate of European USSR is more pronounced. Small

linear settlements, mostly railroad-station villages, occupy the better drained and open sites along the Brest-Moscow trunkline and highway. The towns of Bereza and Ivatsevichi are the largest settlements within the railroad area. Farming is the economic mainstay of the area. At Bereza and Ivatsevichi and at the larger railroad-station villages, there are some industrial plants, such as sawmills, brick-yards, grain mills, railroad repair shops, and other light processing plants.

Considerable military activity is evident along much of the railroad sector. Known installations within the limits of the study area include a large ammunition dump, a fair sized military airfield, and two tank and mobile artillery training and garrison areas. Groups of soldiers have also been seen working along stretches of the railroad line, particularly in the vicinity of the settlements of Oranichitsy, Bluden', Bereza, and Ivatsevichi. Within the area the main transportation artery is the strategically important and heavily traveled Brest-Moscow trunkline. This double-track line carries most of the freight and military and civilian traffic between the Soviet Union and the East European satellites. Several narrow-gauge branch lines serve either military installations or peat-extracting areas. Railroads are supplemented by a number of hard-surfaced and improved rural roads, mostly former Polish post and truck roads. The most important, however, is the newly reconstructed Brest-Bobruysk-Roslavl'-Moscow highway, which parallels the railroad between Bereza and Ivatsevichi.

C. Physical Features

1. Terrain

The landscape of the Tevli-Ivatsevichi area is generally flat. The surface slopes gently toward the south and southeast. Characteristic features of the landscape are washed-out remnants of terminal moraines and fluvioglacial deposits, lowland areas interrupted by scattered swamps and ponds, and boggy areas along rivers and rivulets (Figure 1). As a whole, the area is part of the transition zone between the Volkovysk Heights of the Belorussian Upland and the vast southern lowland centered on the Pripyat River Basin. Local differences in elevation are notably small. The maximum elevations are less than 200 feet above the surrounding plain and occur in the heavily forested area sandwiched between the Yasel'da and Zhegulyanka Rivers. Absolute elevations rise gradually from 489 feet (149 meters) above sea level near the village of Smolyarka to 623 feet (190 meters) above sea level near Bronna Gora. The Bronna Gora is the most prominent hill formation within the entire Tevli-Ivatsevichi area. To the west, toward Tevli, slopes are gentle and elevations range between 476 feet (145 meters) and 528 feet (162 meters) above sea level. Eastward from Bronna Gora, elevations decline gradually to 489 feet (149 meters) at the Zhegulyanka River and then rise again slowly to approximately 512 feet (156 meters) near Ivatsevichi.

Terrain immediately adjacent to the Brest-Moscow railroad trunkline is in general slightly higher than the adjacent land and fairly well

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Figure 1. Drainage and lowland of the type commonly found in the Nevli-Ivatsevichi Area.



Figure 2. A swampy forest characteristic of southern Belorussia.

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drained. Much of it is under cultivation. In some places, however, the railroad is bordered by swamps, bogs, and ponds. Although some of these wet areas are found within the forests (Figure 2), they are more common along the valleys of the several meandering rivers that cross the area in a northwest-southeast direction. Swamps and bogs are generally of the lowland or flood-plain type (Figure 3). In spring, the water levels of the low-banked river generally rise 7 to 10 feet (2 to 3 meters) and flood much of the surrounding lowland. Because of poor natural and artificial drainage, water remains on the land, forming swamps and bogs that are more or less a year-round feature of the landscape. Much of the damp land is covered with swamp grass, peat mosses and a poor growth of brush or trees (Figure 4). Some of the undrained areas are covered with pools and have no tree growth. These are referred to by the native population as galos. During the winter, swamps and bogs frequently freeze over. The depth of ice is dependent on the thickness of snow cover during the period of intense freezing. A heavy snow cover causes uneven freezing of the water surface and frequently results in breaks in the ice. Recently there have been indications that the Soviets are stepping up their reclamation program and are draining large sections of the swamp and bog areas for farming (Figure 5). Notable progress has been reported around the town of Bereza on the Yasel'da River.



Figure 3. Flood-plain swamp like those along the Tassada and Mulkavets Rivers.



Figure 4. Swampland with its characteristic vegetation of brush, trees, and marsh grass.

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Figure 5. Draining swampland
in Brestskaya Oblast'.



Figure 6. Typical rural scene during the
flood season.

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2. Soil Conditions and Overland Trafficability

Except for the moors and the alluvial soils of river valleys, the soils of the area developed mainly through the disintegration of glacial debris.

The soils of the area are of three general types: (1) fairly good clayey soil developed through the disintegration of mineral-rich ground moraines; (2) generally poor soils consisting of gravel and sand deposited as glacial outwash plain; and (3) moor soils. The soils range from various podsollic types to pure peat. The more fertile sandy and sandy-clay podsols, are predominant at the higher levels and along the edges of moors and bogs. Immediately southwest of the Mukhavets River, clayey podsols predominate for a distance of some 12 miles (20 kilometers). Sandy podsols cover the remainder of the sector except in areas of poor drainage, where soils are predominantly of the moor or peat-deposit type.

The principal obstacles to off-road movement are the swamps along the rivers. In some sections, these areas are completely impassable to vehicles and can be crossed on foot only during the drier parts of the year and during the winter months, when they are frozen. Such swamp areas are found along the Shebnya River near Tsvli, along the Mukhavets River southwest of Startsiya Oranchitsy, near the settlement of Kutnevichi, along the Yasel'da River at Bereza, and along the Zhegulyanka River near Ivatsevichi.

Between March and early May, the swamps are completely impassable to both vehicles and persons on foot, except along occasional trails (Figure 6). In fact, almost all the river valleys and other low areas are impassable during this period. From May to December the swamps may be negotiated with caution after reconnoitering. During the heavy rains of late summer and early fall, secondary flooding occurs but it is not a serious hindrance to cross-country movement. Between December and March the swamps are frozen over to a depth of 10 to 15 inches and so are easily passable on foot.

Except for the swamps, trafficability in the Tevli-Ivatsevichi area is generally good. The terrain consists of very gentle slopes. The rivers are shallow and can be crossed at numerous fords during the dry season. In wooded areas the undergrowth is not dense enough to create much of a hindrance to cross-country movement.

3. Vegetation

Vegetation in the Tevli-Ivatsevichi area is of three principal types: woodland, brush and scrub, and grass and bog. Forest covers more than half the area and is located generally on the higher elevations, where the soil is coarse and sandy. Although mixed stands are not uncommon (Figure 7), coniferous trees predominate throughout the area. Pine and spruce are most numerous (Figure 8). Deciduous varieties include alder, birch (Figure 9), and maple. Along the edges of swamps, bogs, and ponds the common trees are willows, poplars, dwarf birches, and water oaks and alders.



Figure 7. Mixed forest with heavy growth of brush and grass.



Figure 8. Pine forest, typical of the higher, drier land in the area.

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Figure 9. Patch of birch trees in a wet forest.



Figure 10. Lumbering activity in a pine forest.

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The larger stands of forest appear like islands of trees surrounded by farm and scrub land or swamp. The forests are strip-cut in order to insure continuous growth and annual crops of trees (Figure 10). Smaller woodlands are merely logged over. Forest stands of considerable size are found in the following areas: (1) a stretch 6 kilometers (4 miles) long between Tsvli and Khar'ki; (2) a stretch 5 kilometers (3 miles) long west of the Mukhavets River; (3) a stretch 12 kilometers (8 miles) long between Bereza and the Zhegulyanka River east of Brown Gora (known to be a forest reserve); (4) a stretch 6 kilometers (4 miles) long between Mekhachevo and the Ivatsevichi vicinity.

Slopes immediately below the forest are covered by a transitional growth of scrub and brush vegetation as are also the newly cut strips within the forests. Closely associated with forest and scrub vegetation is a considerable undergrowth of grass, particularly at lower elevations.

In areas that are wet the year round, there is a large variety of marsh and bog vegetation. Among common varieties are marsh grass, sedge, rush, willow, and a rich assortment of swamp plants (Figure 11). Marsh grass of coarse texture and flat form grows to a height of several feet. It provides fair concealment, particularly just before it is harvested in the summer and early autumn (Figure 12). Cut marsh grass is usually stacked along the banks of rivers or ponds until winter (Figure 13). Some of it, however, is carried by boat to neighboring villages or kolkhozes (Figure 14). Dried marsh grass furnishes bedding for farm



Figure 11. Heavily vegetated swamp area.



Figure 12. Farmer harvesting marsh grass.

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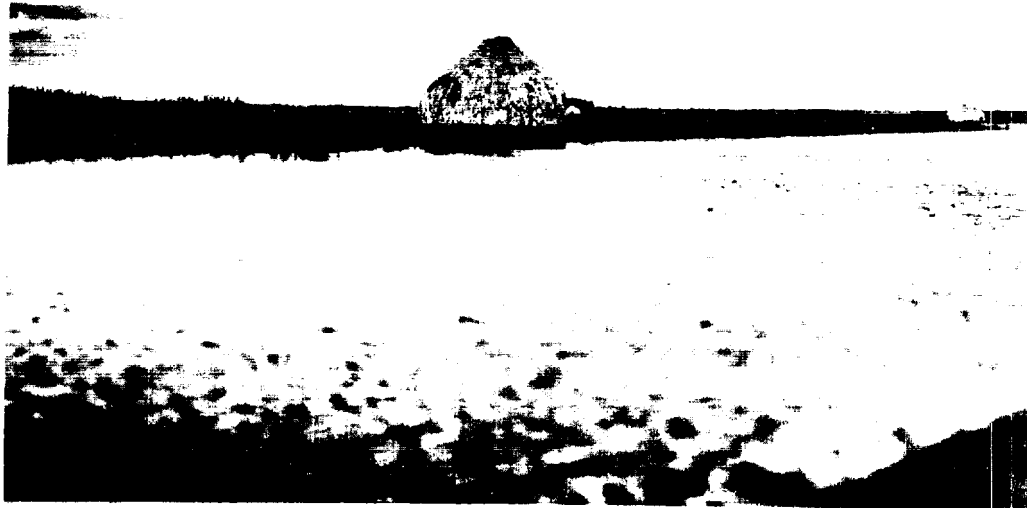


Figure 13. Marsh grass stacked along the Yasel'da River.



Figure 14. Transporting marsh grass by boat.

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animals and also is frequently used for thatching. The twigs of willow trees are used for basket weaving, for fencing farms and fields, and in constructing wicker causeways across swamps.

4. Hydrography

The rivers that cross the Tevli-Ivatsevichi area are tributary to three major river systems -- the Bug, Pripyat, and Nemen. The Mukhavets River, tributary to the Bug River, has two tributaries within the area -- the Shebnya and the Gorodechna. The former intersects the railroad about 3 kilometers (2 miles) southwest of Tevli, the latter near Khar'ki to the northeast. The Yasel'da River, which flows past Bereya, and the Zhelegulyanka, which joins the Yasel'da 6 kilometers (4 miles) southwest of Nekhachevo, are tributary to the Pripyat. The Shchara River flows into the Nemen; its tributary, the Gryvda, crosses the railroad immediately east of Ivatsevichi and again farther to the northeast.

None of these six streams is navigable by boats larger than small rowboats, pole boats, and motorboats (Figure 15). The rivers freeze over every winter, usually during November but sometimes as early as late October or as late as the first part of December. Thawing usually occurs in the latter part of March, but it may be as late as the third week of April.

Particularly severe flooding occurs during the spring thaws, when villages and settlements located on the slightly higher ground become



Figure 15. Farmer poling horse and plow across a swamp.



Figure 16. Farm surrounded by flood waters.

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isolated islands (Figure 16). Water levels may rise from 7 to 10 feet (2 to 3 meters) and remain at that level for 1 or 2 weeks before receding. If the thaw occurs gradually, flood conditions may persist for several months. At flood stage it is impossible to cross the marshes by foot (Figure 17). Since all streams in the area are bordered by swampland, they are difficult to cross by foot at any season, except during the few winter months when they are frozen over.

The Mukhavets River is crossed by the railroad some 1-1/2 miles (2-1/2 kilometers) southwest of Station Oranchitsy. Here the river varies in depth from 3 to 16 feet (1 to 5 meters) and is about 33 feet (10 meters) wide. The current is slow, and the flat banks are swamp- and peat-covered.

The railroad crosses the Yasel'da River, which is 59 miles (95 kilometers) long, approximately 1 mile (1.6 kilometers) northeast of Bereya. At this point, the river is between 100 and 150 feet (30 to 40 meters) wide and from 2 to 4.5 feet (0.6 to 1.5 meters) deep. The velocity averages from 1.5 to 3 feet (0.5 to 0.9 meters) per second. The bottom consists of both sand and silt and contains many potholes. The riverbed is winding, with numerous sharp turns, alternate channels and tributaries, and sandbanks. The banks are from 1.5 to 5 feet (0.5 to 1.5 meters) high and are covered with reeds intermixed with some brush (Figure 18). Despite its swampy nature, large sections of the wide valley are planted in potatoes, grain, and fruit trees. Approximately



Figure 17. Swamp and flood land of this type can be crossed by boat only.



Figure 18. Typical vegetation along river banks.

2 mile (1.6 kilometers) southwest of the double-track railroad bridge the Yasel'da River is spanned by a concrete highway bridge.

The railroad crosses the Zangulyanka River, which flows in a southeasterly direction into Ozero (Lake) Charne, 4 miles (6 kilometers) southwest of Nekhachevo. Within the study area, the width of the river varies from 39 to 66 feet (12 to 20 meters). The valley is 2 to 2-1/2 miles (3 to 4 kilometers) wide and is extremely swampy.

The Gryvda River flows from the northwest; beyond the railroad crossing at Ivatsevichi², it swings north and is crossed by the railroad a second time some 4.5 miles (7.5 kilometers) to the northeast. At Ivatsevichi the Gryvda River is reportedly about 100 feet (30 meters) wide and 16 to 20 feet (5 to 6 meters) deep. Just south of the railroad bridge the river is crossed by a highway bridge; 1/3 mile (1/2 kilometer) north of the railroad is a secondary-road bridge.

D. Climate

The Nevli-Ivatsevichi area is part of a transition zone between the continental climate of European Russia and the maritime climate of the Baltic Sea area. Continental influences are felt most strongly during the winter, which is characterized by fairly cold weather interrupted occasionally by milder weather. Average temperatures are generally below freezing from December through February, but below-freezing temperatures may extend from November to March. The spells of warmer weather in winter are accompanied by fog and thaw, during

which the accumulated ice and snow cover occasionally melts away completely. The influence of maritime climate is most noticeable during the summer months from May through August. Summer temperatures fluctuate from warm to hot, and the heat is especially uncomfortable because of the high humidity. Spring and fall are transition periods. Spring, lasting from early March to about the middle of May, is mild and extremely wet. The general rise of spring temperatures is interrupted by occasional frosts, which occur chiefly at night. The outstanding characteristic of spring is the widespread flooding of the land caused mainly by the excessive rise of river waters. Fall usually begins in September and is marked by cool, wet days.

1. Temperatures

The average annual temperature in the area is about 45°F. January is the coldest month, with a mean temperature of 24°F. The absolute January extremes are -20.2°F and 48.2°F. Freezing weather usually begins about the end of November and lasts roughly 130 days. Thawing generally sets in at the end of March, although short thaws may occur throughout the winter.

Spring temperatures average from 32° to 60°F, but occasional cold spells bring frosts and thermometer readings of 4 or 5 degrees below freezing.

Summer daytime temperatures may rise above 90°F in July and August, but cooler nights with temperatures of 50°-59°F are common. In summer,

there are about 100 days during which the temperatures do not fall below 59°F.

Fall weather is considerably cooler, with temperatures ranging between 59° and 45°F during the day and dropping to between 40° and 32°F at night.

Average monthly and yearly temperatures recorded at Brest and Pinsk, the two weather stations located nearest the study area, are as follows:

Average Monthly and Yearly Temperatures
(in degrees Fahrenheit)

<u>Station</u>	<u>I</u>	<u>II</u>	<u>III</u>	<u>IV</u>	<u>V</u>	<u>VI</u>	<u>VII</u>	<u>VIII</u>	<u>IX</u>	<u>X</u>	<u>XI</u>	<u>XII</u>	<u>Yearly</u>
Brest	23.7	26	33.8	44.8	57.8	62.6	66.2	63.8	55.7	45	36	28	45
Pinsk	23	24	33	44.6	57.8	62.4	66.3	63	55.6	44.6	34.8	26.6	44.6

2. Precipitation

Precipitation within the Tevli-Kvatsevichi area is generally abundant during the summer months but somewhat scant during the winter. Yearly precipitation for the area averages 22 to 24 inches. June, July, and August are the wettest months, with precipitation averaging 3 to 4 inches per month. Summer rains are short and heavy and create local floods in some areas, especially in late July and August. Precipitation is lowest between January and March, amounting to approximately 1 inch per month.

During the winter the snow cover of the area is intermittent because of frequent thaws. The first snowfall usually occurs about the middle

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of November and the last about the middle of March. On the average, the ground is snow covered between 70 to 90 days a year, and maximum snow cover may exceed 4 to 5 inches in depth in some places. Only during extremely severe winters does the snow cover become sufficiently deep to require removal.

The following tables provide data on precipitation and snow cover as recorded at the nearby weather stations of Brest and Pinsk:

(a) Monthly and Yearly Precipitation
(in inches)

<u>Station</u>	<u>I</u>	<u>II</u>	<u>III</u>	<u>IV</u>	<u>V</u>	<u>VI</u>	<u>VII</u>	<u>VIII</u>	<u>IX</u>	<u>X</u>	<u>XI</u>	<u>XII</u>	<u>Yearly</u>
Brest	1.16	.94	1.04	1.92	2.48	3.00	3.76	2.16	2.08	1.72	1.52	1.24	23.04
Pinsk	.94	.98	1.08	1.76	2.20	3.12	3.76	2.84	2.00	1.80	1.60	1.20	23.32

(b) Depth of Snow Cover by Months
(measured in inches over three 10-day periods)

<u>Station</u>	<u>November</u>			<u>December</u>			<u>January</u>		
	<u>I</u>	<u>II</u>	<u>III</u>	<u>I</u>	<u>II</u>	<u>III</u>	<u>I</u>	<u>II</u>	<u>III</u>
Brest	0	0	.39	1.17	1.56	1.56	3.12	3.12	2.66
Pinsk	0	.39	.78	1.17	2.34	2.66	3.90	4.68	4.68

<u>Station</u>	<u>February</u>			<u>March</u>			<u>April</u>		
	<u>I</u>	<u>II</u>	<u>III</u>	<u>I</u>	<u>II</u>	<u>III</u>	<u>I</u>	<u>II</u>	<u>III</u>
Brest	3.51	3.51	2.66	2.34	1.56	.78	0	0	0
Pinsk	4.68	5.46	4.68	3.51	2.66	1.56	.39	0	0

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3. Surface Winds

Northwesterly winds prevail throughout the Tevli-Ivatsevichi area during the summer, bringing heat and moisture from the Baltic Sea areas. Cyclonic storms with wind velocities of 20 to 30 miles an hour frequently pass over the area. On balmy summer days, local breezes from the swampy areas to the more heated dry-land areas blow regularly between 10 a.m. and 5 p.m. During the winter months, winds range from the south through northeast.

4. Visibility and Cloud Cover

In summer, maximum cloudiness occurs at night or early morning and in the afternoon. Night or early morning skies frequently have a cover of low stratus clouds, which often form continuous sheets. Afternoon clouds are usually of the cumulus type. Cloudiness, mainly of low stratus type, is extensive in winter.

Ground fog can be observed in the early morning and late evening hours, particularly during spring and fall. Much of it is of local character and results from the presence of swamps and bogs. Morning fog usually lifts between 9 and 10 a.m. In winter, visibility is poorest during the occasional thaws, when fog may blanket the whole area for 2 or 3 days at a time.

E. Settlement and Economy

1. Population Density, Distribution, and Ethnic Composition

In comparison with the rest of the Belorussian SSR the population density between Tevli and Bronna Gora is fairly high -- 80 to 90 persons per square miles (21-23 per square kilometer). From Bronna Gora eastward to Ivatsevichi the density drops to less than 25 persons per square mile (fewer than 6.5 per square kilometer). A small percentage of the people lives in the larger settlements, but the great majority lives in small, widely scattered villages. These villages are the centers of kolkhozes and average less than 300 in population. For goods and services they rely on market towns, such as Pruzhana, Kobrin, and Bereza, which have populations of 5,000 or more. Individual dwellings on separate plots of land are uncommon.

The rural population is extremely poor, living for the most part by farming, lumbering, livestock raising, peat cutting, and fishing (Figure 19). None of these occupations yields more than a bare livelihood. Low sanitary standards and extremely poor living quarters contribute to the spread of contagious diseases. In addition, lice, fleas, flies, and other insects are numerous, and the water is generally polluted. Malaria is widespread throughout the swamplands. Other common diseases are dysentery, typhus, spotted fever, asiatic cholera, smallpox, typhoid fever, scarlet fever, ague, and horse fly plague.



Figure 19. Method of fishing practiced in most of the swamps of Belorussia.

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Five ethnic groups live in Brestskaya Oblast', and presumably all of these are represented within the study area. Belorussians comprise the overwhelming majority; with Poles, Great Russians, Jews, and Ukrainians forming small minorities. A few Tatars may also live in the area.

The Belorussians, constituting 81 percent of the population, differ only slightly from the Great Russians in origin, language, religion, and culture. There is little feeling of distinctiveness or of hostility between the two groups. This fact, combined with the general political apathy of the Belorussians makes it unlikely that they would participate to any great extent in overt acts of resistance to the Soviet regime. As a group the Belorussians are backward. Culturally, politically, and economically, they have been dominated almost continually by the Russian, Jewish, or Polish minorities. Most of the Belorussians are rural dwellers, and they comprise only a minority of the population in the larger towns like Bereza. Those who move into towns tend to lose their distinctive characteristics and to become Russified or Polonized.

The Poles, about 6 percent of the population, are distinct in culture, religion, and language from both the Great Russians and the Belorussians. Because of these differences the Poles are likely to be hostile to Soviet rule and often become leaders of resistance groups.

Great Russians number only some 2 to 3 percent of the population, but they hold many of the top administrative and technical posts. Their

loyalty to the Soviet regime is assured by their dominant position and by their ethnic identity with the Russian majority of the Soviet Union.

The Jews form a small minority that live almost exclusively in the larger towns. Since they are somewhat better educated than the other ethnic groups, they play an important role in city life, especially in business activities.

The Ukrainians differ from the Great Russians to a greater extent than do the Belorussians, and they also possess greater political consciousness. The Ukrainians, therefore, are more likely to take part in active resistance to the Soviet regime.

2. Agricultural Activity

Because much of the Tsvili-Ivatsevichi area is covered by swamp and marsh, only about a third of the total is cultivated or used for grazing. At the eastern and western ends of the study area -- between Tsvili and Oranchitsy and between Bereza and Ivatsevichi -- less than 30 percent of the land is farmed. In the middle section, between Oranchitsy and Bereza, slightly more land is farmed, 35 to 40 percent. Recently the amount of land suitable for cultivation has been increased somewhat through drainage projects.

The cool, damp climate and the sandy to loamy soil provide conditions favorable for the growth of winter rye, oats, summer barley, potatoes, fodder, flax, and hemp. Hardy vegetables (chiefly cabbages, carrots, and beets) and melons are grown in sufficient quantities for local needs.

Draft animals, particularly horses, are used in large numbers. The cattle raised in the area are Holsteins. Sheep and goats are pastured with the cattle. Hogs, chickens, ducks, and geese are raised on most of the farms and form the main meat supply of the people.

Water is generally obtained from shallow wells 6.5 to 13 feet (2 to 4 meters) deep, with well-sweeps in the form of a long pole balanced in the crotch of a forked tree.

Because drainage is poor throughout the area and the soil is wet and cold, spring crops are yellow rather than green. The shallow surface ditches dug at regular intervals of 30 to 60 feet (9 to 18 meters) make the cultivation of row crops difficult. One-horse plows are in general use, and harrows are made entirely of wood, even the pointed spikes.

For the most part the rural settlements are self-sufficient. Flax is woven by the women, and large bundles of it can be seen drying upright against the walls. Sheep supply both wool for homespun winter clothing and sheepskin for coats and hats. Rye straw and marsh grass are piled to dry in barn enclosures or in the fields usually in round stacks raised 3 feet (1 meter) off the ground on wooden piles.

3. Settlements and Local Industries

The most common type of settlement in the Tevli-Ivatsevichi area is the linear village (Strassendorf), strung out along a fairly wide dirt road (Figure 20). The villages of Tevli, Khar'ki, Sosnówka, Oranchitsy, Kabaki, and Bluden' are good examples of Strassendorf



Figure 20. A Strassendorf village of the type seen throughout Belorussia.



Figure 21. Village located on high ground above Yasel'da River. Note the stack of marsh grass resting on stilts.

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settlements. Some of these villages are as much as 1.5 miles (2.4 kilometers) in length. Throughout most of the study area, villages are spaced roughly 1.5 to 5 miles (2.4 to 8 kilometers) apart. Distances, however, vary considerably, depending on such factors as available agricultural land, drainage, and vegetation. Villages are commonly built on better drained sites above the high-water level, notably on the elevated banks of rivers (Figure 21). The population averages between 500 and 1,500 inhabitants per village.

Most of the villages are supplied with electricity. Houses are single-storied and of wood construction. Many have thatched roofs, but some are roofed with tile or sheet iron. Hollow-stemmed reeds, flat marsh grass, and rye straw are used for thatching. This creates a fire danger, and ladders or long poles to aid in fire fighting can always be seen near the buildings (Figure 22). Houses seldom have more than two rooms, each with a small wood-framed window. Most farmhouses have a fenced-in garden plot about 1/8 acre in size, presumably for vegetables. Isolated farmsteads, dating back to the Polish administration of the area, are relatively few and are usually accompanied with the traditional sweep well (Figure 23).

Several of the settlements in the area are built along the main trunkline or around railroad stations or sidings. Many are closely associated with railroad activities. Such settlements are generally referred to as railroad-station villages or towns. Ivatsevichi,

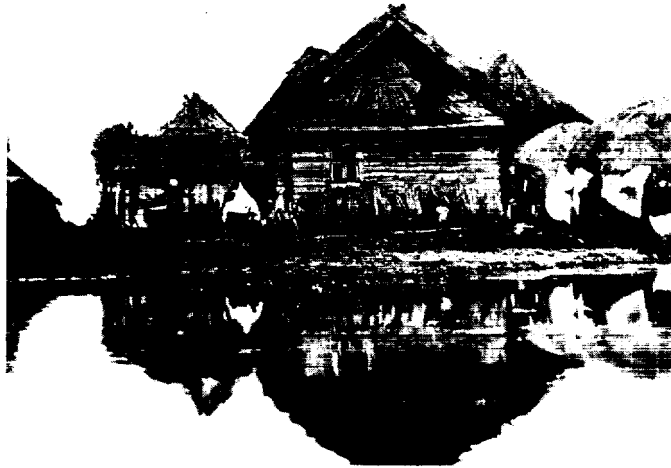


Figure 22. White Russian farmhouse of rough-hewn logs with reed-thatched roof. Note the wooden poles used for fire fighting.



Figure 23. Former Polish farmstead with traditional well sweep.

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Hekhachevo, Kossovo-Polesskoye Bronna Gora, and Linovo are examples of this type. The rayon center of Bereza, the largest community in the area, is the only real example of a cluster-type settlement.

Detailed information on towns is available only on the main settlements of the area -- Bereza and Ivatsevichi. Fragmentary information is also available for some of the less important settlements.

BEREZA, classified by the Soviets as a city (gorod), has a population roughly estimated at 6,000 to 8,000 inhabitants. Most of the many Poles who once lived here have been evacuated to Poland. The city, which is a market place for the surrounding villages, is centered around two nearly parallel roads crossed at right angles by several side streets. The center of the city is densely built up with one- and two-story buildings of the blockhouse type, some brick and others wood. Outside the center of the city, the houses are mostly of wood. They are widely spaced, each surrounded by its own small garden. These houses have no foundations and are thatched with straw or roofed with sheet metal or wood.

A few of the main streets are paved with cobblestones, but most are unpaved. They vary from 20 to 33 feet (6 to 10 meters) in width and, except for the main streets, have no sidewalks. There is no street lighting.

Most, if not all, of the houses have electricity, supplied by a power plant on the Yasel'da River northeast of the city. A steam-operated

waterworks is located north of the railroad bridge and 165 feet (50 meters) west of the river, but water is actually piped into very few buildings. The Bereza fire department has an observation tower 50 to 65 feet (15 to 20 meters) high. Other buildings in the city include a pharmacy; a motion-picture theater; a post, telephone, and telegraph office; and a church.

Bereza contains several industrial establishments. A steam-operated sawmill and a brick factory are located in the western section of the city. The brick factory has an 82-foot (25-meter) brick smokestack and two kilns. In the center of town is a flour mill and on the northern outskirts an unidentified factory. Among the other industries are a linen textile mill and a cement plant. A truck-repair plant just south of the brickyard formerly performed major overhauls, but it reportedly was moved out of the city in 1949.

An estimated 15 percent of Bereza was damaged or destroyed during World War II, but practically all of it has been reconstructed.

IVATSEVICH, classified by the Soviets as a city-type settlement (posyolok gorodskogo tipa), is a railroad town, with a population of approximately 3,000. Houses are widely spaced and are generally one-story wood or brick buildings with low gable roofs thatched with straw or covered with sheet iron. The streets vary from 33 to 39 feet (10 to 12 meters) in width and, except for the cobblestoned highway, are unpaved. The town has no sidewalks, street lighting, or drainage.

It is supplied with electricity, but water is drawn from wells. There is a post and telegraph office in the town.

A major industrial plant of Ivatsevichi is the alcohol factory, which uses potatoes as raw material and has its own power plant. Of the four sawmills in town, three are powered by steam and one by gasoline motors. Attached to one of the sawmills is an MVD woodworking factory, producing windows, doors, and simple furniture. North of the highway is a truck-repair shop. At the southwest edge of town are 10 gasoline storage tanks. A small machine shop is also located in Ivatsevichi.

TEVLI is a Strassendorf-type village stretching for about a mile (1.6 kilometers) along an unimproved dirt road that intersects the Brest-Moscow trunkline. Its houses are one-story wood buildings with low gable roofs thatched with straw or marsh grass. Houses extend along both sides of the small railroad station. Near the eastern end of the village are a church, a cemetery and chapel, and a windmill. A short distance south of the station is a post and telegraph office. The population consists of some 800-1,000 White Russian and Polish peasants.

LIHOVO is divided into two sections. The larger, which is a linear-type settlement, is located about 1 mile (1.6 kilometers) northwest of Oranchitsy station. It is referred to on Soviet maps as M. Lihovo. The second section of the settlement is considerably smaller, being associated mainly with the Oranchitsy railroad station. Near the railroad settlement are several army barracks and a storage area for oil, petroleum, and lubricants.

SLOBUDKA is a small village 3 miles (5 kilometers) north of Oranchitsy station. Although it lies outside the limits of the study area, it is important because of the significant military activity nearby. The village is square in shape, with houses loosely spaced along four dirt roads that cross at right angles. All the houses are of wood, and several have become quite dilapidated. The few newly constructed buildings are mostly barracks, believed to be occupied by Red Army personnel. A car-repair plant is reportedly located in the village. In the eastern part of the settlement is a narrow-gauge railroad station.

BLUDEN' is a combination Strassendorf and railroad-station village. It extends for roughly 2 miles (3.2 kilometers) from the Bereza Kartuskaya station westward along the railroad. It consists of some 50 to 80 wooden houses strung along two parallel dirt roads. The only industrial activity is associated with the extensive railroad facilities in the station area. The village population is estimated at 800-1,000 inhabitants.

ZARECH'YE is located on the east side of the Yasel'da River, immediately beyond the railroad-bridge crossing. It consists of a group of houses loosely arranged along a dirt road that parallels the railroad. Each of the 80-odd dwellings has a 1/2-acre plot for truck gardening. The western edge of the village borders a swampy area of the Yasel'da floodplain and is exposed to frequent flooding.

ERONNA GORA is a railroad village of some 40 to 50 wooden houses. Its population consists of 500-1,000 farmers, reportedly White Russians. Most of the houses are loosely spaced along two intersecting dirt roads. They are mostly one-story buildings with gable roofs thatched with marsh grass or slate covered. Each house has its own fenced-in garden plot. In the northern outskirts, there is a small sawmill that produces furniture for local use. Former PW barracks are located near the railroad station. The village probably billets some of the military personnel connected with the nearby ammunition dump.

NEKHACHEVO is a farming settlement strung along the railroad and main highway west of the Kossovo-Polesskoye station. It consists of some 50 single-story wooden buildings and has an estimated population of 1,500. The village has electricity and a community water well.

KOSSOVO-POLESSKOYE is a small railroad-station village located just east of Nekhachevo. The single-story wooden houses are focused around a road intersection north of the railroad station. The village population, which is reported to be somewhat larger than that of Nekhachevo, is primarily engaged in lumbering and potato farming.

F. Transportation

The backbone of the Tevli-Ivatsevichi railroad sector is the internationally strategic Brest-Moscow trunkline. Apart from being the main transportation artery of the sector, it is the keystone of all economic and military activity in the area. A secondary but

nevertheless important transportation route is the recently improved Brest-Bobruysk-Moscow Highway. This road, which crosses the eastern part of the study area, roughly parallels the railroad from Bereza to Ivatsevichi. With the repair of wartime damages, the road is becoming increasingly important for local and interregional traffic. Other means of transportation in the area include several narrow-gauge branch lines and a number of improved and unimproved dirt roads that intersect the main railroad at several points.

1. The Brest-Moscow Trunkline

The section of railroad between Tevli and Ivatsevichi is part of the main double-track trunkline connecting Brest with Moscow. This steam-operated railroad is by far the most important in Belorussia and one of the primary trunklines in the Soviet Union. It provides the shortest connection between the central industrial region around Moscow and the manufacturing and marketing centers of Central and Western Europe. It also provides an important military link between Moscow, Warsaw, and East Berlin. During World War II, it was the main supply route of the Germans in their thrust toward Moscow.

In the following paragraphs the Tevli-Ivatsevichi section of the trunkline is described in detail. The information provided on features such as rails, signals, trackage, and traffic, however, pertains also to the Brest-Moscow trunkline as a whole.

a. Trackage and Roadbed

The trunkline was badly damaged during World War II, particularly in the areas around Bereza and Ivatsevichi. Until 1947, it operated as a single-track line because of the many temporary repairs being made on the roadbed and bridge crossings. By the fall of 1947, however, Red Army engineers had completely regraded the roadbed, replaced rails and ties, and double tracked the entire line. The new roadbed appears to be well maintained, is approximately 20 feet wide, and is predominantly sandy. Short stretches of the line, however, have a crushed-rock and gravel ballast (Figure 24). Since the railroad crosses generally flat terrain, it has no sharp curves or steep grades. The maximum curvature radius is 1,640 feet (500 meters). In the vicinity of Bronna Gora, the ruling grade is 0.96 percent (ascending) over a distance of about 1,300 feet (400 meters).

b. Rails, Ties, and Signaling System

The entire Brest-Moscow trunkline is provided with type Ia heavy-duty rails. Ties are of wood and are well treated against deterioration. They are spaced at the rate of 1,440 ties per 3,281 feet (1,000 meters) of track. Hand switches and block-type signals are used in railroad stations and yards. The semiautomatic block system was reportedly supplied by the German firm of Siemens and Halske. Electric semaphores are installed at the stations of Bereza-Kartuskaya, Ivatsevichi, and Oranchitsy. Much of the signaling, however, seems to be done by hand.

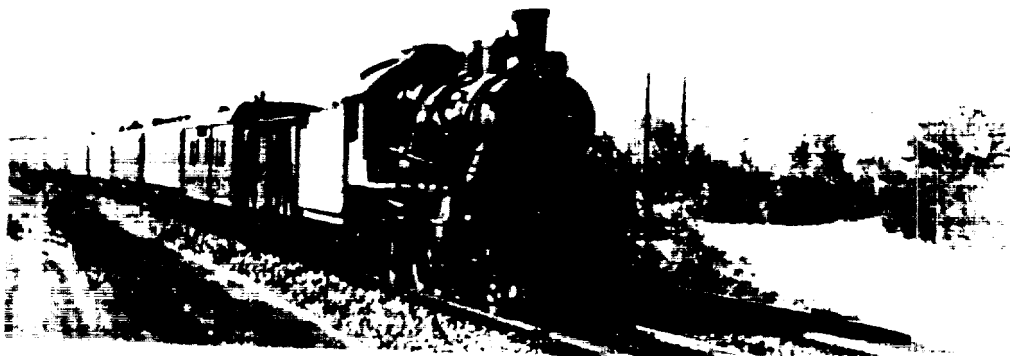


Figure 24. Fast train on the Brest-Moscow trunkline. Note the gravel ballast.



Figure 25. Narrow-gauge railroad of the type used in the study area.

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A common sight is an old man or woman standing outside a hut holding a rolled yellow flag as a signal that the train can proceed with safety.

c. Bridges and Culverts

Along the Tevli-Ivatsevichi section of the railroad, there are 5 fairly large and 9 smaller railroad bridges and 13 or more culverts. The larger bridges cross the Gorodechna, Mukhavets, Yasel'da, Zhegul'yanka, and Gryvda Rivers. All the bridges were destroyed during World War II, and at first makeshift wooden structures were used as substitutes. All the wooden bridges have now been replaced by permanent installations. The smaller secondary bridges span tributary streams and larger drainage ditches. Culverts, usually of concrete construction, are located chiefly in areas that are poorly drained or subject to floods.

The railroad bridges across the Gorodechna and Mukhavets Rivers are located about 5 and 13 miles (8 and 21 kilometers) northeast of Tevli, respectively. Both are single-span steel structures approximately 65 feet (20 meters) long. The estimated width between abutments is 45 feet (14 meters), and the height above water level is about 12 feet (4 meters).

The bridge across the Yasel'da River is located 4 miles (6 kilometers) east of the Bereza-Kartuskaya station and approximately 1.5 miles (2.4 kilometers) northeast of the town of Bereza. The most significant railroad bridge in the study area, it consists of a

single-span steel truss approximately 165 feet (50 meters) long. The bridge is built on two reinforced-concrete piers and has a 16-foot (5-meter) clearance above mean water level. Prior to 1944 the Yasel'da bridge was of a through-truss type, having 2 single-span superstructures on common abutments.

A deck-type bridge of plate girder construction crosses the Zhegul'yanka River some 2 miles (3.2 kilometers) east of Bronna Gora. According to reports, two single-track superstructures are built on common abutments. The span length is estimated at 72 to 82 feet (22 to 28 meters) and the height above mean water level at 11 feet (3.5 meters).

A recently completed railroad bridge crosses the Gryvda River approximately 1 mile (1.6 kilometers) northeast of the Ivatsevichi railroad station. The single-span steel structure replaces a wooden bridge located some 50 feet (15 meters) to the south. The new bridge has reinforced-concrete abutments, and a reinforced-concrete pier in the middle of the stream. According to reports the bridge has an overall length of 187 feet (57 meters) and a width of 20 to 26 feet (6 to 8 meters); the height above mean water level is some 20 feet (6 meters).

d. Branch Lines and Spurs

Narrow-gauge branch lines lead northward from the main line at Oranchitsy, Bereza-Kartuskaya, Bronna Gora, and Nekhachevo stations.

At Ivatsevichi, a narrow-gauge line branches off in a southerly direction. Most of the branches are of 3'6" gauge and are used primarily for industrial or military traffic. Because of poor roadbeds, in many cases laid across swampy ground, traffic on these lines is light and trains consist of only 4 to 6 cars pulled by obsolete steam or diesel engines. Narrow-gauge rails are generally spiked to wooden ties that are spaced 1.5 feet (50 centimeters) apart. In a few stretches the rails are screwed to iron ties. Much of the industrial freight carried consists of lumber and peat (Figure 25). Military shipments include stores, ammunition, some motorized equipment and spare parts, and unspecified numbers of troops.

A steam-operated narrow-gauge line leads from Oranchitsy station northward to Slubudka and Pruzhana. The line is 7.5 miles (13 kilometers) long and serves primarily the needs of Red Army installations located at Slobudka and Pruzhana. Some sources indicate that the line may have been improved to meet increased traffic demands. A short broad-gauge spur leads to the oil-storage area near Oranchitsy station.

According to early postwar information, a narrow-gauge line leading in a north-northwesterly direction connected with the trunkline at Bereza-Kartuskaya station. It was about 20 miles (32 kilometers) long and terminated in a peat and forest area near the improved road connecting Pruzhana and Slonim. Stops were made at the small settlements of Selets and Mikhalin. Since no activity has been reported on this

line in recent years, it may quite possibly have been abandoned. An unconfirmed report, indicates that a newly constructed single-track branch line leaves the trunkline some 9 miles (15 kilometers) west of Bluden' and leads in a northwesterly direction.

According to Soviet maps at the scale of 1:500,000, a narrow-gauge siding about 2 miles (3.2 kilometers) long also leads eastward from Oranchitsy station. This spur reportedly runs to a sandpit in the western suburbs of Bereza.

At Bronna Gora a small spur branches off to a local sawmill. About 1.8 miles (3 kilometers) northeast of the settlement is another narrow-gauge branch line that leads to the large ammunition dump north of Bronna Gora. This line, which is some 4.4 miles (7.3 kilometers) long, is used solely for military traffic. Recent reports seem to indicate that this branch is being converted to broad gauge.

Before 1945, a steam-operated narrow-gauge line led northwest from Kossovo-Polesskoye station for a distance of about 11 miles (17 kilometers) and terminated near a glass factory northeast of the settlement of Mikhalin. According to PW reports, wartime damages along the line (particularly destroyed bridges) have not been repaired, and the line may have been abandoned or dismantled.

At Ivatsevichi, the trunkline connects with a sizable network of narrow-gauge lines. A light railroad leads from Ivatsevichi southwestward to Ivanovo on the Brest-Pinsk-Luninets trunkline. Two freight

trains a day travel the entire distance of some 60 miles (96 kilometers) in each direction. Each train reportedly consists of 4 to 6 low-side gondola cars pulled by a steam or diesel-type engine. Branching off this narrow-gauge line are spurs leading to various settlements on the Oginskiy Canal. The most important of these is the spur leading to the town of Telekhany.

e. Adjacent Telegraph and Telephone Lines

An open-wire line roughly parallels the railroad between Tevli and Oranchitsy. It originates at Brest and is believed to be a telegraph line. In the vicinity of Tevli the line runs on the north side of the track. Some 6 miles (10 kilometers) farther to the east, it crosses the railroad and then follows the south side of the track for an estimated 4 miles (6 kilometers). After recrossing the railroad, it continues along the north side, gradually veering off to the northwest in the direction of Baranovich and Minsk. According to eyewitness reports, the telegraph line has single wooden poles about 26 feet (8 meters) high and spaced about 130 feet (40 meters) apart. The single crossbars are of wood, and there are no spare insulators. Reports also indicate that an underground telecommunications cable closely follows the route of the open-wire line.

A second open-wire line (also referred to as a telephone line) enters the study area from the southwest at Bereza. It, too, originates at Brest and leads to Slutsk and Mogilev. This line consists of 12

wires strung on wooden poles 26 feet (8 meters) high and some 140 feet (43 meters) apart. It roughly follows the south side of the railroad to a point near Ivatsevichi, where it turns off to the northeast.

F. Railroad Stations and Maintenance Facilities

The official Soviet Railroad Timetable for 1956 lists 11 railroad stations and flag stops within the study area. From west to east, they are Tevli, Lyasy, Kanarskiy, Oranchitsy, Pavlovichi Polesskiye, Peschanka, Bereza Kartuskaya, Zarech'ye, Bronna Gora, Kossovo-Polesskoye, and Ivatsevichi. Of these, Bereza Kartuskaya is the largest and best equipped station. It is the only stop for fast trains within the area and trains stop for a period of 15 minutes. Kanarskiy, Peschanka, and Zarech'ye are flag stops only. The remaining stations are used only by slow passenger and freight trains. The stopping time for passenger trains averages 3 to 7 minutes. Railroad maintenance and traffic facilities at individual stations are as follows:

Tevli

- (1) Small station building
- (2) Loading ramp with freight shed
- (3) Water tower
- (4) Small repair shop and forge
- (5) Small yard consisting of 3-4 terminal tracks
2 sidings 650 and 980 feet (200 and 300 meters) long

Lyasy

- (1) Small station or loading ramp
- (2) 2 sidings

Kanarskiy

- (1) Flag stop only; located a short distance west of Oranchitsy station

Oranchitsy

- (1) Large station area with storage buildings and huts; western part of station handles mainly passenger traffic; eastern part used for freight traffic
- (2) Railroad yard consisting of 4 or 5 terminal tracks, 8 sidings, and a track scale
- (3) Water tower
- (4) Junction facilities for narrow-gauge line leading to Pruzhana

Pavlovichi Polesskiye

- (1) (Wartime information indicated that 2 sidings, 8 switches, and 2 signal and control towers were destroyed in 1944. They may possibly have been replaced)

Peschanka

- (1) Flag stop only

Bereza Kartuskaya

- (1) Single-story brick station on north side of main track at northern outskirts of settlement of Bluden'.
- (2) Large railroad yard at eastern end of the station; includes "Y" track and switching area, with room for as many as 50 parked cars; engine house with turntable and repair shops accommodating 10-15 locomotives; open storage area and ash pit; coaling area, with storage space for 1,000-2,000 tons of coal; large water tower (Figure 26); and stone loading ramp with several storage buildings and grain sheds.
- (3) Storage area with loading ramps at western end of station

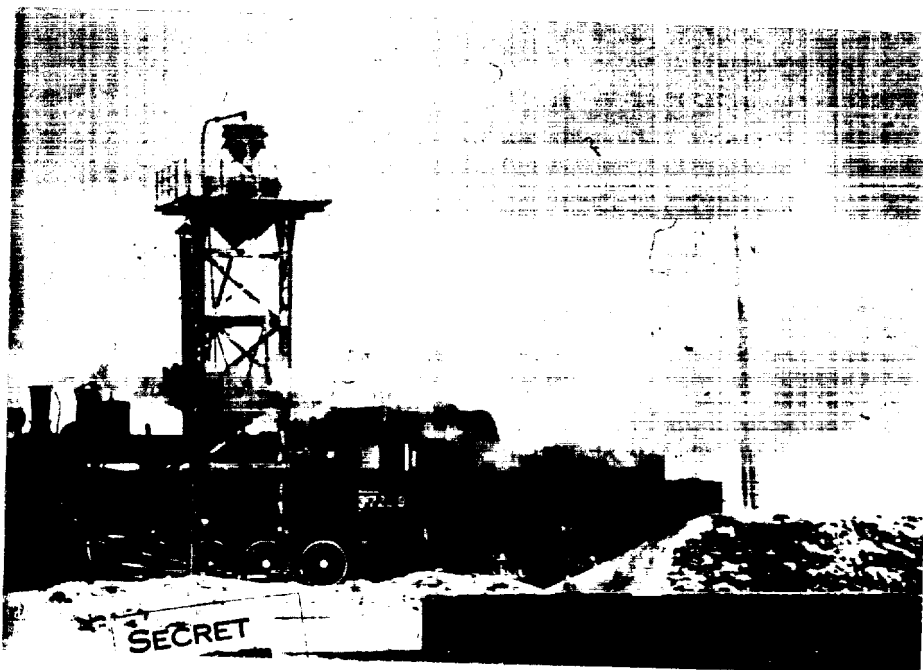


Figure 26. Locomotive water tower at the Bereza-Kartuskaya station. Note coal pile along track.

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- (4) Set of 8 sidings running lengthwise across station area
- (5) Electric power plant
- (6) Servicing facilities for narrow-gauge railroad traffic

Zarech'ye

- (1) Flag stop only

Bronna Gora

- (1) Single-story brick railroad station on south side of track
- (2) 2 terminal tracks 2,300 and 2,600 feet (700 and 800 meters) long
- (3) 2 running sidings
- (4) Small number of storage sheds
- (5) Spur to sawmill
- (6) Possibly a servicing stop for narrow-gauge traffic leading toward ammunition dump

Kosovo-Poleskoye

- (1) Loading ramps on 3 or 4 terminal tracks; used for shipping timber and potatoes
- (2) 2 or 3 running sidings
- (3) Railroad station, water tank, and repair shops (destroyed but reportedly replaced)
- (4) Junction for narrow-gauge line (now believed abandoned)

Ivatsevichi

- (1) (Reportedly one of the largest timber-loading stations in Belorussia)
- (2) Brick railroad station on south side of track
- (3) Emergency wooden station on opposite side of track

- (4) Several loading ramps on 3 terminal tracks
- (5) Water tank and pumping station
- (6) 4 running sidings
- (7) Narrow-gauge station and railroad transshipment yard

g. Railroad Traffic

Railroad traffic between Tevli and Ivatsevichi is extremely heavy. To a large degree, it is part of the heavy international traffic moving between Moscow, Warsaw, and Berlin. West-moving traffic includes Soviet raw materials, coal, iron ore, and foodstuffs shipped to Poland and East Germany. Return traffic to the Soviet Union includes mainly war-reparation materials, prefabricated houses, building materials, manufactured products of all types, and sizable shipments of uranium. Uranium traffic has special priority along the entire Brest-Moscow trunkline. Ore shipments move at the rate of 2 or more trains per week, with an estimated total of about 150 cars. Each car carries approximately 15 to 20 tons of uranium ore, which is shipped in paper bags or tin containers.

In addition to the international freight traffic, there is a fair amount of local freight movement within the study area. It consists primarily of agricultural products, lumber and lumber products, and raw materials shipped to Minsk for processing by its limited industrial facilities.

On the basis of postwar observations, one-way freight traffic appears to range from 15 to 30 trains a day. Freight trains vary from

30 to 60 cars in length and consist of 4-axle-type gondolas, boxcars, flatcars, tank cars, and refrigerator cars. The average speed of freight trains does not exceed 25 miles (39 kilometers) per hour.

Passenger and military trains account for approximately one-fifth of the overall railroad traffic in the area. Six passenger trains cross the area daily in each direction. Two of these are fast trains, and the other four are slower local trains. One of the fast trains, known as the "Blue Angel" or "Blue Express," was put into operation in the spring of 1955. It operates between Moscow, Brest, and Berlin, covering the trip in 52 hours without transferring. The other fast train provides direct service between Brest and Moscow. Both these trains usually consist of 10 cars -- a baggage car, 6 coaches (hard and soft), a dining car, and an international car for foreign nationals. The slower passenger trains generally consist of about 16 cars. Passengers are predominantly military, roughly 60 percent officers. At times, 50 to 100 soldiers have been observed on a single train. Much of the military traffic goes to military units stationed at Baranovichi, Bereza, Pruzhana, or Bronna Gora, but some continues westward to Red Army installations in Poland and East Germany.

The maximum rated traffic capacity of the Brest-Moscow trunkline, including both freight and passenger movement, has been estimated at 120 pairs of trains each day.

2. The Brest-Bobruysk-Moscow Highway

The best available approach route from the west into the USSR north of the Pripet Marshes is the important Brest-Bobruysk-Moscow Highway. Although badly damaged during World War II, the road underwent intensive reconstruction during the period 1946-48. Since being reopened to traffic, it has been used both for interregional trucking and for sustained military traffic, including tank movements.

Originally the highway connected Brest with Moscow, via Kobrin, Bereza, Ivatsevichi, Slutsk, Bobruysk, and Roslavl'. Postwar information, however, indicates that a paved shortcut leading from Ivatsevichi via Baranovichi to Minsk was under construction in the late 1940's. At Minsk, the road was to connect with the Soviet Autobahn to Moscow. It is quite probable that this shortcut has been completed and is now in operation.

The highway is an all-weather, (gravel-surfaced) 2-lane road capable of handling sustained commercial and military traffic. Its overall width is estimated at 26 feet (8 meters) and its travel surface at 20 feet (6 meters). (Although several PW reports claim that much of the road has an asphalt surface, most of it appears to have only an improved gravel surface with short stretches of asphalt in the larger urban centers.)

The highway enters the study area from the southwest at Bereza, and from there parallels the Brest-Moscow trunkline to Ivatsevichi. Along this stretch of the road, much of the roadbed has been built up above the

surrounding marshland. Road shoulders are of graded earth or gravel and vary in height from 3 to 6 feet.

Within the city limits of Bereza the highway has been surfaced with asphalt and serves as the main thoroughfare. It has also been widened to 39 feet (12 meters). Just beyond the northwestern outskirts of town the road crosses the Yasel'da River over a bridge of postwar construction that was opened for traffic in May 1948. Before that, traffic moved over a provisional wooden bridge just southeast of the new structure. The new bridge has a single span and reinforced-concrete girders. It is 394 feet (120 meters) long, and has an overall width of 30 feet (9 meters). The footpaths on both sides are about 3.5 feet (1 meter) wide.

Between Bereza and Nekhachevo station the highway runs along the eastern side of the railroad at distances varying from a few hundred feet to approximately 1.2 miles (2 kilometers). A single-span concrete bridge 82 feet (25 meters) long crosses the Zhegulyanka River.

Near the southeastern outskirts of Nekhachevo the highway crosses the railroad by an overpass of early postwar construction. The overpass, opened for traffic in 1945, replaces a former level crossing. It is a concrete structure supported by 6 reinforced piers and is about 66 feet (20 meters) long and 26 feet (8 meters) wide. Beyond this point the highway hugs the west side of the railroad all the way to Ivatsevichi.

Just beyond Ivatsevichi, it recrosses the railroad over another recently completed overpass. After crossing the Gryvda River east of Ivatsevichi, the road gradually veers to the southeast.

Road traffic between Bereza and Ivatsevichi is fairly heavy, consisting mainly of truck and military vehicles. A regularly scheduled busline also operates daily between Brest and Baranovichi.

3. Secondary Roads Along the Brest-Moscow Trunkline

Throughout the study area, numerous secondary roads, trails, and footpaths lead to or intersect the railroad. Among these are three hard-surfaced all-weather roads capable of carrying 2-lane traffic. The roads lead (a) northward and southward through Linovo, (b) northward from Bluden', and (c) northwestward from Nekhachevo. In addition, there are a few improved gravel country roads, which were formerly used by the Polish postal service. These roads lead (a) from Tevli northeast to Pruzhana, (b) from Tevli northwest to Shcherchevo, (c) from Karaki northeast to Bereza, (d) from Bereza Kartuskaya station southeast to Bereza, and (e) from Bereza northwest to Selets. Three improved roads also cross the railroad between Bereza and Bronna Gora, and two more lead off from Ivatsevichi.

All others are seasonal roads with unimproved surfaces. Most of them intersect the railroad at level crossings, and the average distance between roads is approximately 1.5 miles (2.4 kilometers). All the unimproved dirt roads are of poor quality (Figure 27) and are impassable

~~S-E-C-R-E-T~~



Figure 27. Unimproved dirt road of the type commonly seen throughout Brestskaya Oblast'.

~~S-E-C-R-E-T~~

during spring thaws and after heavy fall rains. People generally use stout one-horse wagons drawn by animals of a stocky breed; frequently long distances are covered on foot. A number of tracks and trails run through forests and along fence lines.

G. Military Activity and Development

1. Military Installations and Movements

Along the Tsvli-Ivatsevichi sector of the railroad, military activity is far more pronounced at Oranchitsy and to the east than farther west. From Oranchitsy eastward to Ivatsevichi, soldiers can frequently be seen working in large groups along the railroad, stockpiling lumber or guarding military installations.

A gasoline storage area is located near Oranchitsy, on a knoll immediately south of the railroad and west of the Pruzhana-Zaprudy Highway. Eighteen above-ground storage tanks have been observed, each of which is about 30 feet (9 meters) long and 10 to 16 feet (3 to 5 meters) in diameter. The tanks lie with their axes parallel to the surface of the ground. Gasoline is brought by rail in 50-ton tank cars, which are shunted onto a siding equipped with permanent pipes leading to the storage tanks. It can be assumed that the underground storage capacity is even greater than that above ground. The entire area is surrounded by two barbed-wire fences and is guarded by soldiers, some in watch towers and others on foot patrolling the area between the fences.

In light woods just west of the storage area is another restricted area surrounded by barbed wire and guarded by troops. Nearby are three barracks occupied by infantry soldiers.

An army tank and automobile repair plant is located north of Oranchitsy -- just east of the Pruzhana-Oranchitsy road near the village of Slobudka. Four or five two-story gray buildings, perhaps used in part as barracks, lie 330 to 500 feet (100 to 150 meters) east of the repair plant. South of the plant and 115 feet (35 meters) east of the highway are two wooden bunkers, probably used as living quarters for soldiers. They are built partly underground and are 115 to 130 feet (35 to 40 meters) long. Two similar buildings are located some 230 feet (70 meters) east of the bunker.

A tank and armored-car proving ground and training field lies less than a mile southeast of the repair plant. Training exercises have included 4 to 6 T-34 tanks 3 or 4 times a week.

Pruzhana is the headquarters of a local garrison. Both officers and enlisted men are billeted in private homes.

The greatest concentration of military strength along the railroad sector is at and near Bereza. In this vicinity are a POL storage dump, an airfield, a tank-maneuver field, and numerous barracks.

The military headquarters in Bereza is located in the north section of the city. Soldiers of this command are reported to wear gray-green uniforms with blue epaulets. Tank units in the vicinity, however, wear

brown uniforms with black epaulets and collar tabs. Three or four three-story brick barracks have been built just beyond the southwest outskirts of Bereza and are reportedly occupied by an air-force unit. The buildings are 100 to 130 feet (30 to 40 meters) long and 50 feet (15 meters) wide and have gabled tile roofs and windows with wooden frames.

A tank-corps barracks is located at the west edge of town on the north side of the highway. It is a 3- or 4-story red-brick building that measures about 250 by 65 by 50 feet (75 by 20 by 15 meters) and has a low-pitched hip roof covered with red tile. The barracks area, which is 1,000 feet by 330 feet (300 by 100 meters) in extent, is surrounded by a wood picket fence topped with barbed wire and is guarded by soldiers. Within the enclosure are 2 garages, which have room for about 35 tanks, as well as a military POL dump, which lies immediately north of the barracks and is camouflaged by the woods. A military signal unit is stationed just west of the tank-corps barracks.

On the east side of Soviet Street in the settlement of Bereza, there is a militia station, 40 by 26 feet (12 by 8 meters) in size.

Stretching south from the southwestern outskirts of Bereza is a tank training ground. It includes an area of slightly rolling, partly wooded country with sandy soil and much underbrush. The area is not guarded but is off-limits for civilians. Frequent tank activity has been observed there, often at night, but no reports indicate that the infantry has participated.

At one time, some 150 tanks and self-propelled guns were reportedly parked between the railroad and the road leading from the station into Bereza. This group consisted principally of T-34's, T-85's, Stalin 2's, and JSV-122's.

About a mile north of Bluden' and immediately east of the narrow-gauge branch railroad to Selets is an airfield that is reported to have undergone recent expansion. It has at least two runways about 255 feet (78 meters) wide. A runway oriented NW-SE is some 6,600 feet (2,000 meters) long; another, oriented NNE-SSW, is 3,600 feet (1,100 meters) long. Both have hard surfaces and unlimited extensibility. IL-28's are reported to have been using this airfield in February 1955. If the airfield has been sufficiently extended and improved, it is quite possible that medium bombers (Beagle type) may now be stationed here.

At Bronna Gora, across the railroad from the station there are two wooden barracks formerly used for PW's. Each measures about 80 by 30 by 13 feet (25 by 9 by 4 meters) and has a gabled tar paper roof.

Near Bronna Gora is an important ammunition and ordnance depot. It is located in a mixed forest about 3 miles (5 kilometers) WNW of the railroad station and covers an area 2 to 2.5 miles (3 to 4 kilometers) long and 1.2 miles (2 kilometers) wide. It is enclosed by a barbed-wire fence 10 feet (3 meters) high, which is guarded by armed soldiers every 650 feet (200 meters), who patrol the area with the aid of

searchlights. The enclosure contains at least 10 buildings and is served by both a railroad spur and by the secondary road between Smol'na and Kosuv. The depot is reportedly used as a storage area for new artillery guns as well as ammunition.

North of Nekhachevo is a former PW camp, which may now be used as a barracks for Soviet troops. It is a one-story stone building measuring about 82 by 40 by 20 feet (25 by 12 by 6 meters) and has a gabled tin roof. It is surrounded by a barbed-wire fence with a watchtower. At one time, some 600 PW's were quartered there while they were constructing the highway.

A military patrol of two soldiers armed with submachineguns has been reported along the railroad in the vicinity of Nekhachevo. The patrol was made daily but not at the same hour.

Ivatsevichi also is a major center of military activity. Installations there include a POL dump, a tank enclosure, and an ammunition dump. The POL dump is reported to be the central one for the entire Bereza area. It is located north of the highway in the middle of Ivatsevichi and consists of 6 to 8 concrete bunkers protruding about 3 feet (1 meter) above the ground. Each bunker contains one storage tank. The dump is camouflaged by trees and enclosed by a fence. The enclosure for army tanks is situated on a low hill NNW of Ivatsevichi. It is surrounded by a high board fence and is reported to contain 50 to 100 medium tanks, possible JS-2's. There are also several

long, low, wooden buildings within the enclosure. Soldiers seen there wore olive-green uniforms with black epaulets and tank-corps insignia. On the southwest edge of Ivatsevichi there is an ammunition dump consisting of 4 revetted buildings and 5 other buildings.

2. Partisan Resistance

Partisan activity has been reported at several points along and near the Tevli-Ivatsevichi sector of the railroad, but much of the activity apparently occurred during the period 1945-50. The partisan resistance reflects opposition to the Soviet annexation of this formerly Polish territory, to Soviet transfer of local residents to other parts of the USSR, and to collectivization and military service. Remnants of the partisan groups probably still persist in the more isolated areas.

Near Kobrynⁿ, 10 miles (16 kilometers) SSE of Tevli, partisans were active in 1947 and 1948. Some of them were deserters from the Soviet Army. In the vicinity of Zhabinka, on the railroad 13 miles (21 kilometers) southwest of Tevli, 9 incidents of resistance were reported during the period 1951-53. Polish partisans belonging to the WIN (Wolnosc i Niepodlezlose -- Freedom and Independence Movement) and Belorussian partisans were reportedly active in the Bereza area until 1950. Between 1948 and 1950, 17 resistance incidents were reported in the vicinity of Bereza, both north and south of the railroad, and activity was even stronger in 1946-47. At that time, police raids into the woods were carried out 2 or 3 times a month. From late 1945 until late 1948, there were many partisans hiding in the old German pillboxes in the swamp near Ivatsevichi.

3. Soviet Order of Battle for the Belorussian SSR

The following order of battle, while for the most part including locations outside the area, is of direct importance in determining the disposition of troops within the study area:

<u>Military Units</u>	<u>Headquarters</u>
Belorussian Mil Dist HQ	Minsk
Twenty-eighth Army	Grodno
CXXVIII Rifle Corps	Brest
12th Gds Mecz Div	Brest
50th Gds Rifle Div	(2 regts in Kovalevo)
XX Rifle Corps	Brest
48th Gds Rifle Div	Grodno
55th Gds Rifle Div	Volkovysk
Fifth Gds Mecz Army	Grodno
10th Tank Div	Bobruysk
29th Tank Div	Borisov
V/1 Mecz Div	Slutsk
	Osipovichi
 Subordination Uncertain	
6th Gds Rifle (Mecz?) Div	Borisov
103rd Arbne Gds Rifle Div	Vitebsk
120th Gds Rifle Div	Minsk
82nd Tank Regt (July '54)	Bereza
 Security Forces (July '54)	
226th MVD Regt	Minsk
297th MVD Regt	Vitebsk
432nd MVD Regt	Minsk
16th Border Detachment	Belorussian Border District

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