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AMS TECHNICAL MANUAL NO. 17

RUSSIAN MAP SYMBOLS

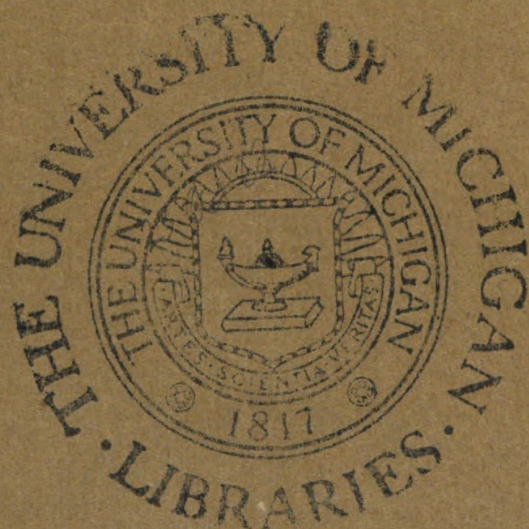
FIRST EDITION
NOVEMBER 1946

ARMY MAP SERVICE
CORPS OF ENGINEERS, U. S. ARMY
WASHINGTON, D. C.

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RUSSIAN MAPPING

This publication presents in convenient form the symbols appearing on maps of various scales and origins covering Russian areas. Reference should also be made to AMS Technical Manual No. 12, Glossary of Russian Map Terms (204323).

Much of the material contained in Part I and Part II was taken from *Zeichenerklärung für Russische Karten* (Legend for Russian Maps), a comprehensive compilation made by the Germans from various sources. This was published at Warsaw in 1942 by the Office of Military Maps and Surveys under the direction of the High Command, General Staff of the German Armed Forces. Army Map Service experts used the German publication as material for its publication after subjecting it to a thorough study and edit. Additional symbols and descriptions of the maps were obtained through a supplementary study of numerous original maps.

The material in Part III and Part IV was compiled by AMS through an exhaustive study of available German and Japanese maps.

Under the Czarist regime, military mapping came under the general direction of the Korpus Voyennykh Topografov, KVT (Corps of Military Topographers). The actual mapping in the several military districts into which the country was divided was performed by separate military units each known as a Voyenno Topograficheskii Otdel, VTO (Military Topographical Division). The KVT and its subsidiaries were generally inferior mapping agencies. This is evident in examining their maps, most of which are crudely compiled, poorly drafted and filled with inaccuracies.

The Revolution of 1917 brought about a renaissance in Russian mapping. 1917 to 1920 can be regarded as a period of transition and was characterized by frequent changes in organization, considerable optimistic planning, but little original mapping. Under the Voyenno Topograficheskoye Upravleniye, VTU (Military Topographical Administration) some of the Czarist sheets were revised. However, this work was not extensive and the revisions were few, consisting principally in converting contours from the old sazhen measuring system to the metric system.* In 1919 the major mapping organization was the Upravleniye Voyennykh Topografov, UVT (Administration of Military Topographers).

About this time, the Red Army General Staff initiated a program whose aim was the assumption of full control of military mapping. It was a gradual and arduous process, for the various civilian officials were loath to become subservient to the military. The culmination of this movement came in 1939 with the establishment of the Glavnoye Upravleniye Geodezu i Kartografu, GUGK (Chief Administration of Geodesy and Cartography). This progressive organization is responsible for all mapping in the USSR. It performs the general planning and coordinates the work of its subsidiary organizations.

Progress in Russian mapping since 1920, especially under the GUGK, has been remarkable. Practically all the work of the Czarist topographers was discarded as obsolete. A new spheroid was computed, a rigid triangulation system was established, survey methods were modernized, the metric system was adopted replacing the outmoded sazhen system, symbolization and map design underwent tremendous improvements, sheet lines were designed on a breakdown of the 1:1,000,000 International Map of the World, and cartographic and reproduction techniques were completely modernized. As far as actual mapping is concerned the Soviets have done well, for despite the size of the country adequate large scale coverage is available for all strategic areas.

* One sazhen=7 feet=approximately 2.1336 meters.

It will be noted that in certain of the sections which follow, certain features are indicated by more than one symbol. The majority of these duplications are confined to the symbolization for USSR maps and generally appear on sheets made prior to the establishment of the GUGK.

PART I

USSR MAPS

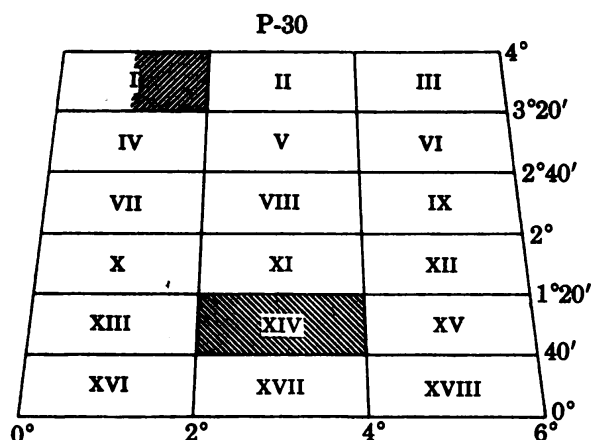
Since the revolution of 1917 Russia has made considerable progress in mapping. While it is debatable whether its sheets should be classed with those of the top-ranking mapping agencies of the world, they are still much better than the average and may be regarded generally as of good reliability. The amount of information shown on the sheets reflects the general continental technique of crowding a map with a profusion of detail much of which is unimportant from a military point of view.

Under the USSR, mapping has been undergoing a continuous evolution. Consequently, the descriptive phraseology of certain symbols, especially roads, will differ depending upon area and year of publication. In studying individual USSR maps, correct translation of symbol legend descriptions should be determined to permit proper interpretation of the maps.

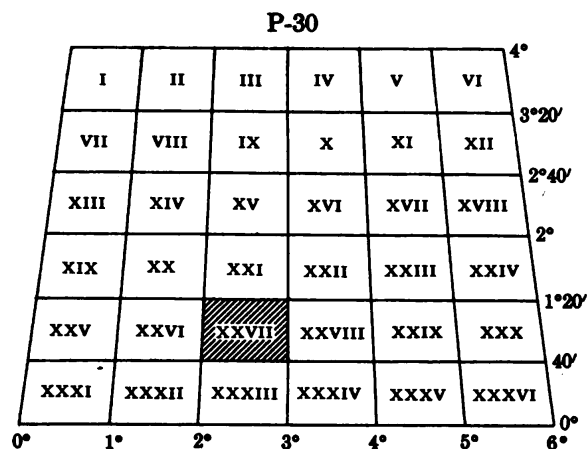
The 1:1,000,000 sheets follow the sheet size and numbering plan of the International Map of the World (IMW).

A 1:1,000,000 sheet is divided into four 1:500,000 sheets (2° NS \times 3° EW). Each is identified by the number of the 1:1,000,000 sheet within which it falls followed by a Russian letter designating the geographical quarter of the IMW: A for NW, Б (B) for NE, В (V) for SW, and Г (G) for SE.

The USSR 1:200,000 sheets appear in three sizes, $40'$ NS \times 1° EW, $40'$ NS \times 2° EW and $1^{\circ}20'$ NS \times 2° EW, each system being a breakdown of an IMW sheet. Two numbering systems are employed which also are based on the IMW system. Under the first system, the IMW is divided into 18 parts $40'$ NS \times 2° EW, numbered I to XVIII, reading in a left to right-top to bottom fashion. The $40'$ NS \times 2° EW sheets follow this system, with the number of any sheet being read as that of its IMW followed by the Roman number indicating its locations; for example: P-30-XIV.

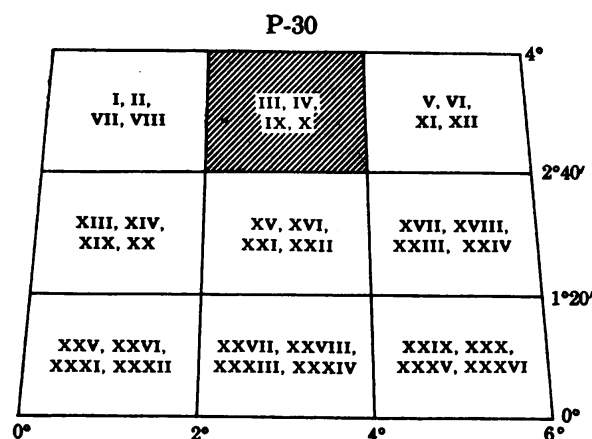


The $40' \text{ NS} \times 1^\circ \text{ EW}$ sheets are numbered by either of two systems. The first is basically the same as that used for the $40' \times 2^\circ$ sheets. In determining the number of a smaller sheet, it is regarded as a half of a larger one. The number is the same as that of the $40' \times 2^\circ$ sheet within which it falls, followed by **ВОСТОЧНАЯ ПОЛОВИНА, ВОСТ. ПОЛ** or **ВП** designating the eastern half, or **ЗАПАДНАЯ ПОЛОВИНА, ЗАП. ПОЛ** or **ЗП** designating the western half. Thus the number of the $40' \text{ NS} \times 1^\circ \text{ EW}$ sheet covering the east half of the most northwesterly sheet in the above diagram would read: P-30-I-ВП. Under the second numbering system, each IMW is divided into $36 \times 40' \text{ NE} \times 1^\circ \text{ EW}$ parts, numbered I to XXXVI reading in a left to right-top to bottom fashion.



Thus, the number of the $40' \times 1^\circ$ sheet indicated in the diagram above would be P-30-XXXVII.

The $1^\circ 20' \text{ NS} \times 2^\circ \text{ EW}$ sheets may be regarded as composites of the $40' \times 1^\circ$ sheets, each including four of the smaller sheets.



The number of any sheet is determined by reading the IMW sheet number to which are added the Roman numbers of each of the smaller sheets; for example:

P-30-III, IV, IX, X

It will be noted that sheet sizes and numbering schemes for the 1:200,000 sheets are consistent within any one IMW.

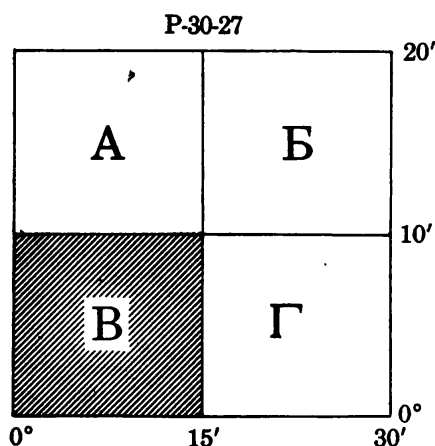
2
P-30

1	2	3	4	5	6	7	8	9	10	11	12	6"
13	14	15	16	17	18	19	20	21	22	23	24	3°40' 3
25	26	27	28	29	30	31	32	33	34	35	36	3°20'
37	38	39	40	41	42	43	44	45	46	47	48	2°40'
49	50	51	52	53	54	55	56	57	58	59	60	2°20' 6 ✓
61	62	63	64	65	66	67	68	69	70	71	72	2"
73	74	75	76	77	78	79	80	81	82	83	84	1°40'
85	86	87	88	89	90	91	92	93	94	95	96	1°20'
97	98	99	100	101	102	103	104	105	106	107	108	1"
109	110	111	112	113	114	115	116	117	118	119	120	40'
121	122	123	124	125	126	127	128	129	130	131	132	20'
133	134	135	136	137	138	139	140	141	142	143	144	0°

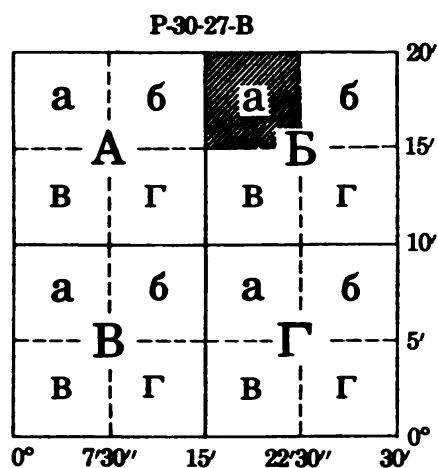
0° 30' 1° 1°30' 2° 2°30' 3° 3°30' 4° 4°30' 5° 5°30' 6°

250

The 1:50,000 sheets are 10' NS x 15' EW, each being a quarter of a 1:100,000 sheet with 576 sheets covering on standard IMW sheet. The number of a 1:50,000 sheet is determined by reading the number of the 1:100,000 sheet within which it falls followed by A, B (B), B(V) or Γ(G) representing the NW, NE, SW and SE geographical quarters respectively; for example: P30-27-B.



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Section 1 contains the symbolization of the 1:25,000 and 1:50,000 USSR maps. The original German symbol book indicates that the symbolization was also intended for maps of 1:75,000. However, as far as can be determined no maps at this scale have been published. Section 2 contains the symbolization for maps of 1:100,000, which is generally similar to that used on the larger scale sheets. Section 3 supplements Section 1 and Section 2, containing additional large scale symbols found by AMS through its study of original sources. Section 4 contains the symbolization for the 1:200,000 maps; Section 5, that for 1:500,000 maps; and Section 6, that for 1:1,000,000 maps.

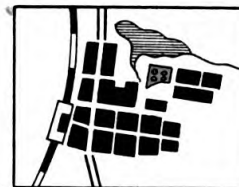
**PART I
SECTION 1**

**SYMBOLS APPEARING ON
USSR MAPS AT THE SCALES
OF
1:25,000
1:50,000**

1. Large city _____



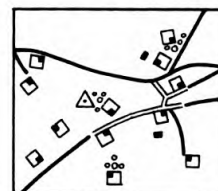
2. Small and medium-sized city or town _____



3. Village or settlement _____



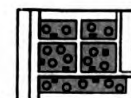
4. Scattered settlement _____



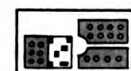
5. Dwellings (suburbs or villas) _____



6. Camp _____






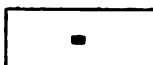
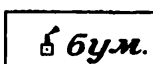
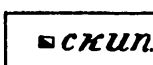
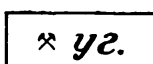


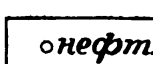
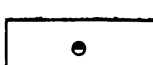
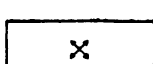
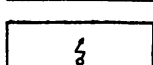

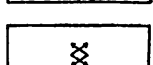
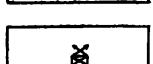

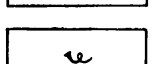





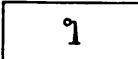
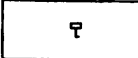
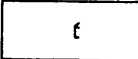


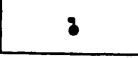


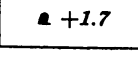


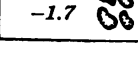
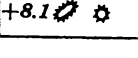

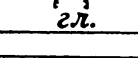

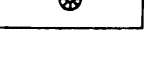
7. Government-owned domain _____



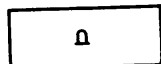
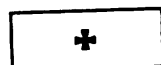
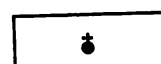
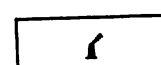
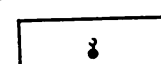


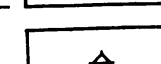
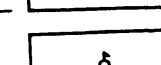
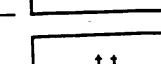
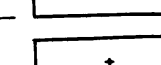
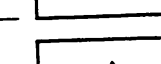
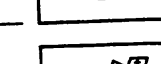
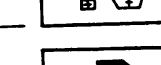
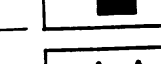

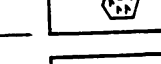




















8. Manor, farm, parsonage (in foreign territory) _____

















9. Isolated farm (drawn to scale) _____	
10. Isolated farm (not drawn to scale) _____	
11. Nomad settlement, residence of tribal chief _____	
12. Permanent location of yurt (nomad tents) _____	
13. Ruin of Ljadowa village _____	
14. Barn, shed _____	
15. Factory or mill with smokestacks _____	
16. Factory or mill without smokestacks _____	
17. Pit, gallery or digging in operation (mine) _____	
18. Pit, gallery or digging, abandoned (mine) _____	
19. Mine, ore deposit _____	
20. Petroleum boring _____	
21. Gasoline dump, filling station _____	
22. Power plant _____	
23. High power radio station _____	
24. Post office _____	
25. Telegraph office _____	
26. Post and telegraph office _____	
27. Central telephone exchange _____	
28. Station for stage coach _____	


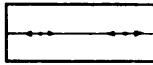
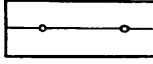
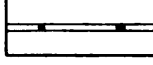
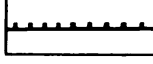
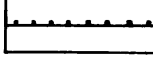
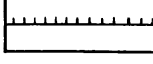
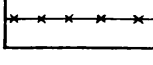
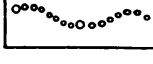
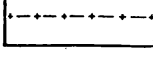
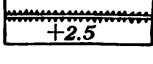

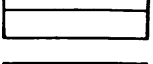


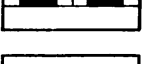

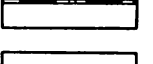
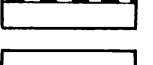
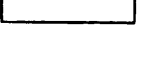
29. Airport, landing field _____	
30. Grain elevator _____	
31. Motor depot (outside inhabited localities) _____	 MTC MTM
32. Railroad or light signal (landmark) _____	
33. Kilometer post _____	
34. Road sign post _____	
35. Frontier guard headquarters _____	
36. Frontier barrier _____	
37. Customs office _____	
38. Quarantine office _____	
39. Meteorological station _____	
40. Isolated boulder (height indicated) _____	
41. Rocks, boulders _____	
42. Cliffs _____	
43. Pits, depressions (depths indicated) _____	
44. Burial mounds (height indicated) _____	
45. Sand pit _____	
46. Clay pit _____	
47. Quarry _____	
48. Active volcano _____	

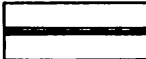
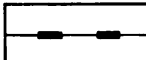


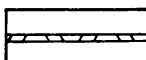
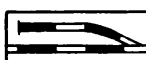

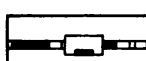
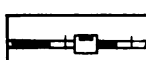

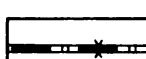
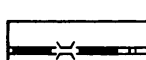
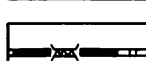
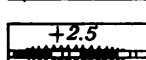




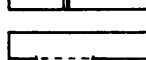
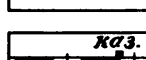
49. Extinct volcano _____	
50. Mud volcano _____	
51. Monument _____	
52. Church, monastery _____	
53. Chapel _____	
54. Landmark chimney _____	
55. Mosque _____	
56. Buddhist monastery, temple, pagoda _____	
57. Prayerhouse of Asiatic nations _____	
58. Prayerhouse (tent) of Asiatic nations _____	
59. Mohammedan shrine, prayerhouse _____	
60. Cross and shrine (with crucifix) _____	
61. Isolated grave _____	
62. Ancient Grave _____	
63. Cemeteries _____	
64. Cemetery with trees (drawn true to scale) _____	
65. Cemetery with trees (not drawn to scale) _____	
66. Non-Christian cemetery _____	
67. Animal burying ground, flaying ground _____	
68. Astronomical position _____	

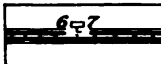

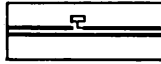
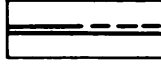
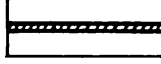
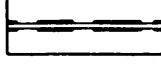
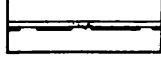
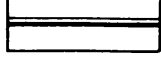
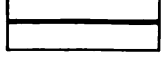
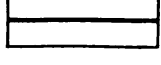
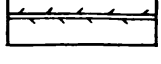
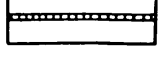

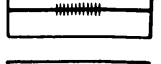
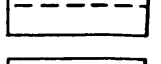
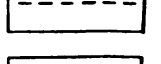
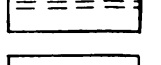
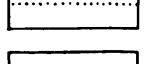
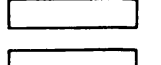
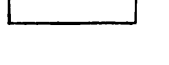
69. Triangulation station _____	 92.6
70. Triangulation station on burial mound _____	 95.7
71. Triangulation station on chimney _____	
72. Triangulation station on church _____	
73. Triangulation station on mosque _____	
74. Spot elevation _____	• 71.7
75. Bench mark _____	 52.1
76. Low order control point _____	• •
77. Boundary marker used as low order control point _____	
78. Geometrically surveyed point _____	 77.2
79. Precise geometrically surveyed point _____	 9.4
80. Windmill; Tree (geometrically surveyed points) _____	 102.5
81. Geometrically surveyed crossroads _____	 85.1
82. Observation tower _____	
83. Towerlike structure or building _____	
84. Oilwell derrick _____	
85. Water tower, fire station tower (watch tower) _____	•
86. Lighthouse _____	
87. Lightship _____	
88. Winter harbor _____	

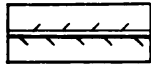
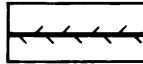
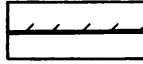
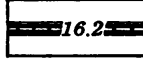
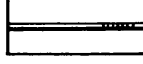
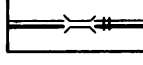
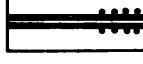
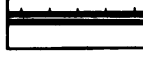
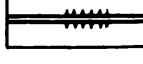

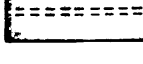


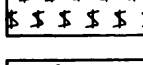
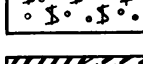
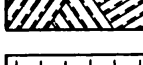
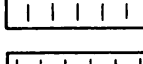
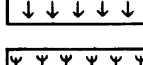

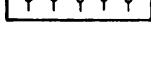
89. Buoy _____	
90. Channel marker _____	
91. Water level gauge _____	
92. Rock under water _____	
93. Rock above water _____	
94. Sounding number _____	16
95. Stone windmill _____	
96. Wooden windmill _____	
97. Wind propelled turbine _____	
98. Well with wind turbine _____	
99. Floating mill; Water mill _____	 
100. Sawmill _____	
101. Water wheel _____	
102. Well _____	°K.
103. Draw well _____	
104. Artesian well _____	°артк
105. Spring _____	гкж.
106. Mineral spring _____	гсерк.
107. Cistern (in Central Asia) _____	■ какк
108. Cistern with tile superstructure _____	■сардоба

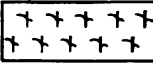
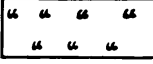
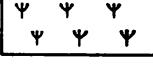
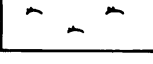

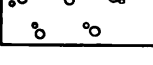
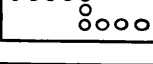
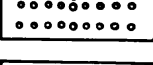



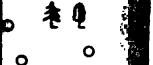
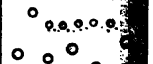
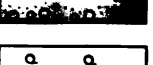
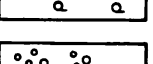
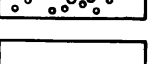
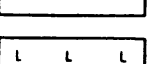


109. Corral _____	
110. Silo _____	
111. Apiary _____	
112. Isolated tree (coniferous) _____	
113. Isolated tree (deciduous) _____	
114. Forest under 6 meters in height _____	
115. Forest over 6 meters in height _____	
116. Isolated bush in steppe _____	
117. Forest service station _____	
118. Forest ranger's house _____	
119. International boundary with marker _____	
120. U.S.S.R. polar possession boundary _____	
121. U.S.S.R. boundary _____	
122. A.S.S.R. (oblast) boundary _____	
123. Autonomous oblast and kray boundary _____	
124. National okrug and administrative boundary _____	
125. Rayon boundary _____	
126. Okrug, uyezd boundary _____	
127. Telegraph and telephone line _____	
128. Submarine cable _____	

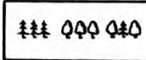

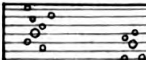
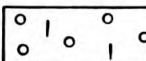
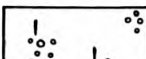

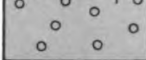
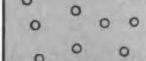
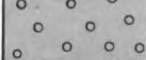
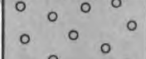
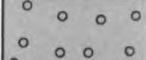
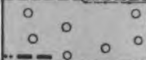
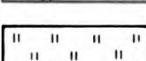
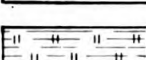
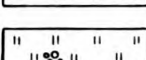
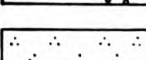
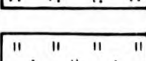
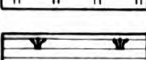


129. Electric line (low voltage) _____ 
130. High tension line _____ 
131. Gas conduit on ground _____ 
132. Petroleum conduit on ground _____ 
133. Stone wall over 1 meter in height _____ 
134. Stone or clay walls less than 1 meter in height _____ 
135. Wooden fence _____ 
136. Fence of brushwood _____ 
137. Hedge _____ 
138. Barbed wire fence _____ 
139. Artificial rampart (+2.5=relative height in meters) _____ 
140. (a) Trench; (b) Bunker; (c) Gangway _____ 
141. Dry trench (boundary between mines) _____ 
142. Three track railroad _____ 
143. Two track railroad _____ 
144. Single track railroad (roadbed for second track) _____ 
145. Single track railroad _____ 
146. Electrified double track railroad _____ 
147. Narrow gauge railroad _____ 
148. Horse-drawn tram line _____ 

149. Electric street railroad _____	
150. Aerial cableway _____	
151. Proposed or planned railroad _____	
152. Railroad under construction _____	
153. Abandoned railroad _____	
154. Dead-end tracks (spurs) _____	
155. First class station _____	
156. Second class station _____	
157. Third class station _____	
158. Water tower _____	
159. Culvert _____	
160. Small bridge _____	
161. Large bridge _____	
162. Embankment _____	
163. Cut _____	
164. Level crossing _____	
165. Railroad underpass _____	
166. Railroad overpass _____	
167. Railroad tunnel _____	
168. Signalmen's huts _____	

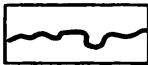

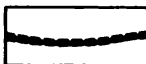
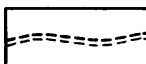
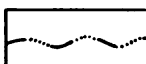

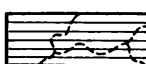






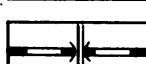
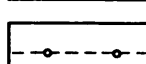
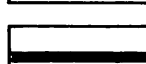


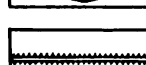

169. State motor highway, with kilometer marker _____	
170. Improved highway (asphalt, tar, concrete), with kilometer marker _____	
171. Highway, paved street, with kilometer marker _____	
172. Highway, paved street (with traffic obstructions) _____	
173. Proposed highway (diagrammatically drafted) _____	
174. Highway under construction _____	
175. Metaled country road under construction _____	
176. Gravel and improved country road (former post and truck roads) _____	
177. Principal country road _____	
178. Country road _____	
179. Cattle path _____	
180. Road paved with wood, road for tractor _____	
181. Metaled highway on corduroy road and fascines _____	
182. Highway on corduroy road and fascines _____	
183. Dirt road, forest road _____	
184. Foot and bridle path, pack trail _____	
185. Caravan road _____	
186. Winter road _____	
187. Road with wood fence _____	
188. Road with stone wall _____	

189. Gravel and improved country road (hedges both sides) _____ 
190. Road with hedges on both sides _____ 
191. Road with hedges on one side _____ 
192. Road width _____ 
193. Grade over 10 percent _____ 
194. Bridge 2 or more lanes wide _____ 
195. Tree-lined road _____ 
196. Telephone line along road _____ 
197. Fill along road _____ 
198. Cut along road _____ 
199. Fire break, forest clearing _____ 
200. Park _____ 
201. Orchard _____ 
202. Vineyard _____ 
203. Garden of mixed vegetation _____ 
204. Vegetable garden _____ 
205. Hops _____ 
206. Rice _____ 
207. Cotton _____ 
208. Tea _____ 

209. Tobacco _____ 
210. Kendyr (fibrous plant) _____ 
211. Kenaf _____ 
212. Saksaul (tree-like underbrush of Central Asia) _____ 
213. Young forest plantation, tree nursery _____ 
214. Small forest area at edge of steppe _____ 
215. Narrow strip of forest _____ 
216. Young trees up to 3 meters in height _____ 
217. Peat bog (turbary) _____ 
218. Coniferous forest _____ 
219. Deciduous forest _____ 
220. Mixed forest _____ 
221. Transition from timber to copse or brushwood _____ 
222. Brushwood, dwarf forest _____ 
223. Sparse forest _____ 
224. Dense undergrowth _____ 
225. Burned-over area _____ 
226. Logged-off area _____ 
227. Gradual passage from forest to sparse forest, underbrush or meadow _____ 

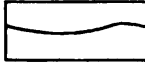
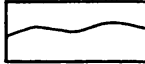
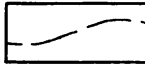
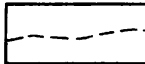
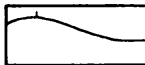
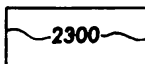
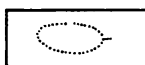
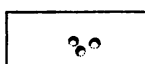
228. Isolated graves as orientation points _____ 
229. Swampy forest _____ 
230. Impassable swamp with bushy growth _____ 
231. Dwarf pine and knee timber (gnarled wood) _____ 
232. Underbrush and black thorn _____ 
233. Glade (4 = width in meters) _____ 
234. Glade with ditch on both sides _____ 
235. Glade with ditch on one side _____ 
236. Glade bounded on both sides by hedges _____ 
237. Path through glade (symbol for glade not drafted) _____ 
238. Glade with telephone line through center or along side _____ 
239. Glade with boundaries running parallel _____ 
240. Meadow _____ 
241. Swampy meadow _____ 
242. Meadow with brushes _____ 
243. Hillocks and small hills _____ 
344. Hillocks in meadows _____ 
245. Impassable swamp with reeds _____ 
246. Almost impassable swamp (0.8 = depth in meters) _____ 
247. Passable swamp _____ 

248. Impassable salt marsh _____	
249. Passable salt marsh _____	
250. Salty steppes (solonchak) _____	
251. Stony steppes _____	
252. Grassy steppes _____	
253. Desert-like steppes _____	
254. Level sandy area _____	
255. Hilly dunes _____	
256. Crescent dunes (barchanes) _____	
257. Small shifting dunes, traveling dunes _____	
258. Tundras _____	
259. Mud cracks _____	
260. Dry ditch _____	
261. Ditches less than 3 meters wide _____	
262. Canalized river _____	
263. Ditches over 3 meters wide _____	
264. Ditch 3 meters wide and over, with tree cultivations _____	
265. Ditch between dams _____	
266. Towpath along canal _____	
267. Navigable canal _____	

268. Brook, small river _____ 
269. Intermittent stream _____ 
270. Large intermittent stream _____ 
271. Dry river bed _____ 
272. Underground and dwindling streams _____ 
273. Intermittent lake, liman (salty marsh near the sea) _____ 
274. Rivers within marsh _____ 
275. Bridge less than 10 meters long _____ 
276. Bridge more than 10 meters long _____ 
277. Bridge (numerator=length in meters; denominator=permissible load in tons) _____ 
278. Ford (numerator=depth in meters; denominator=nature of bottom) _____ 
279. Weir _____ 
280. Retaining sluice _____ 
281. Aqueduct _____ 
282. Water holes _____ 
283. Watermain _____ 
284. Flood stage _____ 
285. High and low tide gauges _____ 
286. Jetty, dike, breakwater _____ 
287. Shoal (depth in meters); Sand bank _____ 

288. Passenger ferry	пер.
289. Vehicle ferry	пар.
290. Wooden lock	дер.
291. Stone lock	кам
292. Iron lock	желез.
293. Bridge on raft	
294. Pontoon bridge	
295. Wooden bridge	
296. Stone and ferro concrete bridge	
297. Iron bridge	
298. Wooden vertical lift or swing bridge	
299. Stone vertical lift or swing bridge	
300. Iron vertical lift or swing bridge	
301. Log dump	зап.
302. Width of stream in meters	100
303. Speed and direction of current	
304. Diversion dam	
305. Water level	92.6
306. Rapids	
307. Waterfall	
308. Swinging ferry	
309. Rowboat ferry	
310. Rowing ferry (2=permissible load in tons)	
311. Cable ferry	
312. Wharf with buildings	
313. Whirlpool or eddy	
314. Anchorage	
315. Docks	



316. Index contour _____ 
317. Intermediate contour _____ 
318. Auxiliary contour _____ 
319. Auxiliary contour _____ 
320. Hachure (indicating downward slope) _____ 
321. Elevation number on contour _____ 
322. Peak which cannot be represented by contours _____ 
323. Karst holes (sinkholes) _____ 

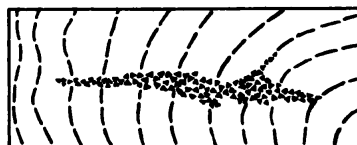
1. Eternal snow _____



2. Glacier _____



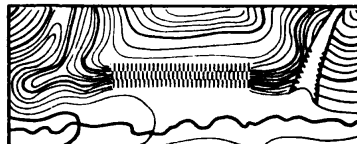
3. Glacier with moraine _____



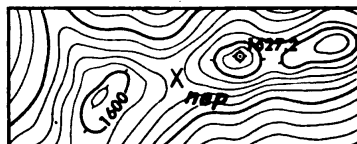
4. Cliffs _____



5. Steep slopes _____



6. Elevations of peaks and contours; Mountain pass _____



7. { 1. Earth slope, steep ledges
2. Rocky slope, steep ledges
3. Sandy and stony slope _____



8. Narrow earth gorges and erosions _____



9. Earth gorges _____

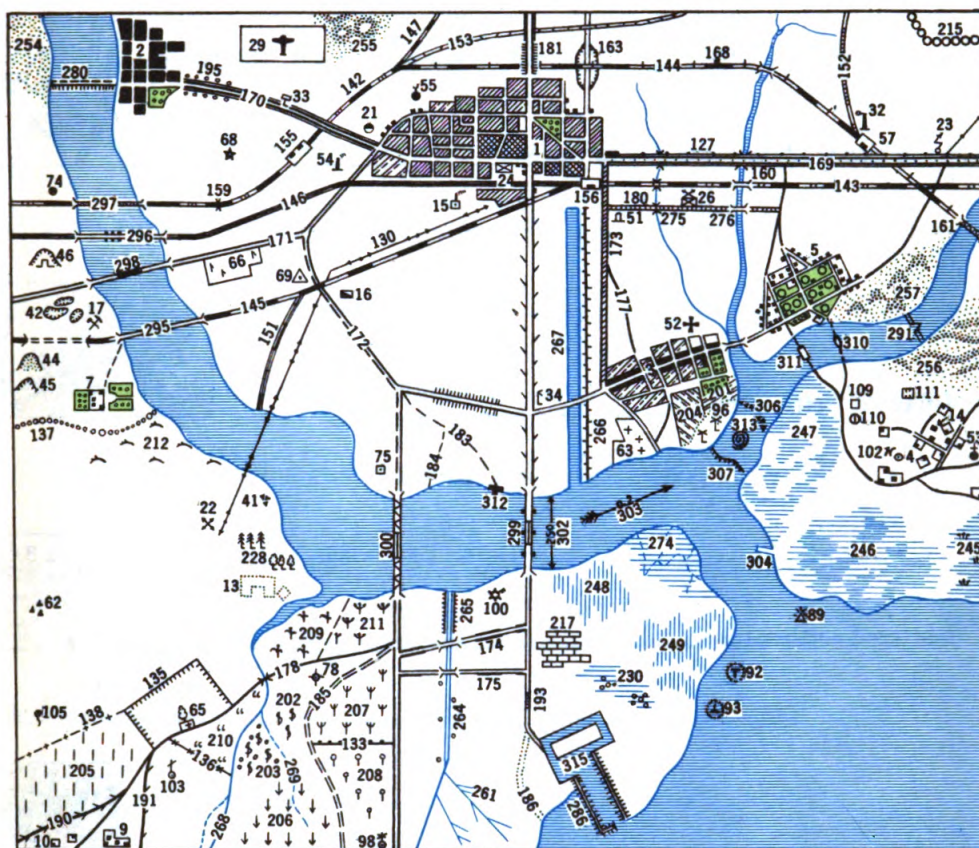


10. Forest on the mountains _____



**PART I
SECTION 2**

**SYMBOLS APPEARING ON
USSR MAPS AT THE SCALE
OF
1:100,000**

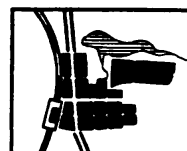


The symbols in the diagram above are explained in the following pages. The keying numbers are added to facilitate ready reference.

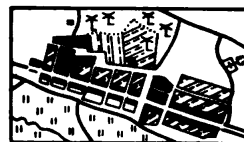
1. Large city _____



2. Small and medium-sized city or town _____



3. Village or settlement _____



4. Scattered settlement _____



5. Dwellings (suburbs or villas) _____



6. Camp _____


























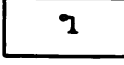
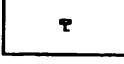
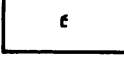




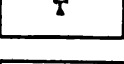
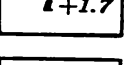
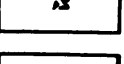
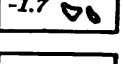
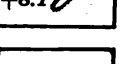
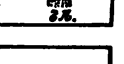
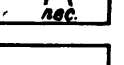

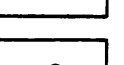
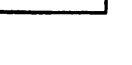
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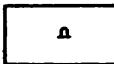
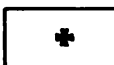

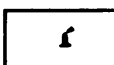
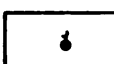

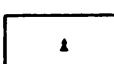
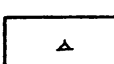
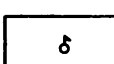
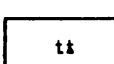

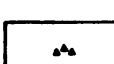


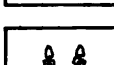

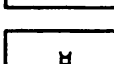
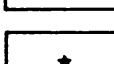


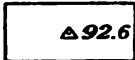
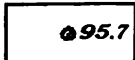



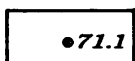
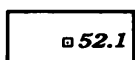
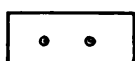
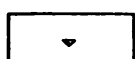
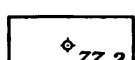
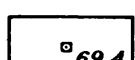
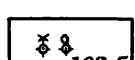
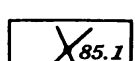
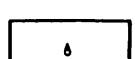
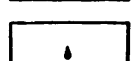

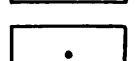

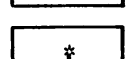
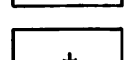
8. Manor, farm, parsonage (in foreign territory) _____























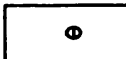
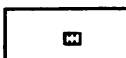
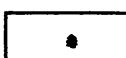
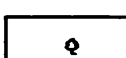
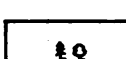
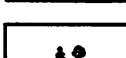

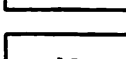
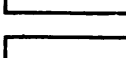
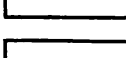
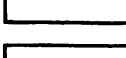
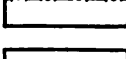
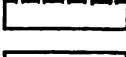
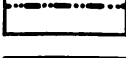
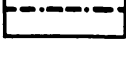
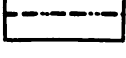
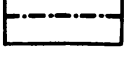
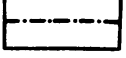
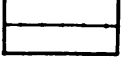
9. Isolated farm (drawn to scale) _____	
10. Isolated farm (not drawn to scale) _____	
11. Nomad settlement, residence of tribal chief _____	
12. Permanent location of yurt (nomad tents) _____	
13. Ruin of Ljadowa village _____	
14. Barn, shed _____	
15. Factory or mill with smokestacks _____	
16. Factory or mill without smokestacks _____	
17. Pit, gallery or digging in operation (mine) _____	
18. Pit, gallery or digging, abandoned (mine) _____	
19. Mine, ore deposit _____	
20. Petroleum boring _____	
21. Gasoline dump, filling station _____	
22. Power plant _____	
23. High power radio station _____	
24. Post office _____	
25. Telegraph office _____	
26. Post and telegraph office _____	
27. Central telephone exchange _____	
28. Station for stage coach _____	

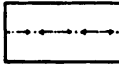
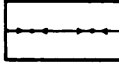
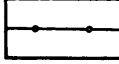
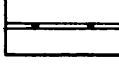
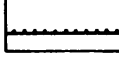
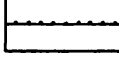
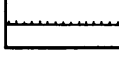
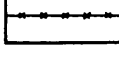
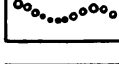
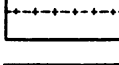
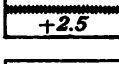
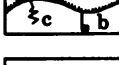
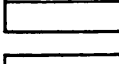
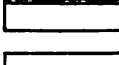
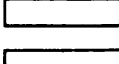
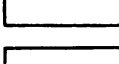
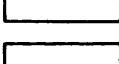
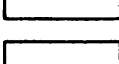
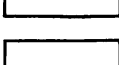
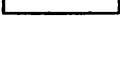
29. Airport, landing field _____	
30. Grain elevator _____	
31. Motor depot (outside inhabited localities) _____	
32. Railroad or light signal (landmark) _____	
33. Kilometer post _____	
34. Road sign post _____	
35. Frontier guard headquarters _____	
36. Frontier barrier _____	
37. Customs office _____	
38. Quarantine office _____	
39. Meteorological station _____	
40. Isolated boulder (height indicated) _____	
41. Rocks, boulders _____	
42. Pits, depressions (depths indicated) _____	
43. Burial mounds (heights indicated) _____	
44. Sand pit _____	
45. Clay pit _____	
46. Quarry _____	
47. Cliffs _____	
48. Active volcano _____	

49. Extinct volcano _____	
50. Mud volcano _____	
51. Monument _____	
52. Church, monastery _____	
53. Chapel _____	
54. Landmark chimney _____	
55. Mosque _____	
56. Buddhist monastery, temple, pagoda _____	
57. Prayerhouse of Asiatic nations _____	
58. Prayerhouse (tent) of Asiatic nations _____	
59. Mohammedan shrine, prayerhouse _____	
60. Cross and shrine (with crucifix) _____	
61. Isolated grave _____	
62. Ancient graves _____	
63. Cemeteries _____	
64. Cemetery with trees (drawn true to scale) _____	
65. Cemetery with trees (not drawn to scale) _____	
66. Non-Christian cemetery _____	
67. Animal burying ground, flaying ground _____	
68. Astronomical position _____	

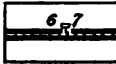
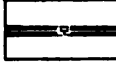

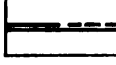
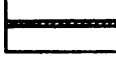
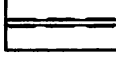
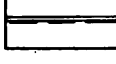
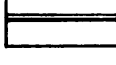
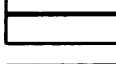
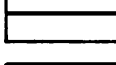
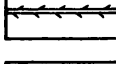
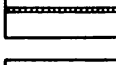

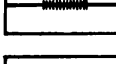
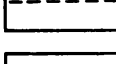
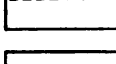
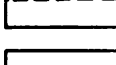
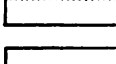
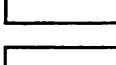
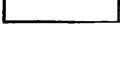
69. Triangulation station _____	 $\Delta 92.6$
70. Triangulation station on burial mound _____	 $\Delta 95.7$
71. Triangulation station on chimney _____	
72. Triangulation station on church _____	
73. Triangulation station on mosque _____	
74. Spot elevation _____	 $\bullet 71.1$
75. Bench mark _____	 $\square 52.1$
76. Low order control point _____	
77. Boundary marker used as low order control point _____	
78. Geometrically surveyed point _____	 $\diamond 77.2$
79. Precise geometrically surveyed point _____	 $\square 69.4$
80. Windmill; Tree (geometrically surveyed points) _____	 $\times 102.5$
81. Geometrically surveyed crossroads _____	 $X 85.1$
82. Observation tower _____	
83. Towerlike structure or building _____	
84. Oilwell derrick _____	
85. Water tower, fire station tower (watch tower) _____	
86. Lighthouse _____	
87. Lightship _____	
88. Winter harbor _____	

89. Buoy	
90. Channel marker	
91. Water level gauge	
92. Rock under water	
93. Rock above water	
94. Sounding number	16
95. Stone windmill	
96. Wooden windmill	
97. Wind propelled turbine	
98. Well with wind turbine	
99. Floating mill; Water mill	
100. Sawmill	
101. Water wheel	
102. Well	
103. Draw well	
104. Artesian well	
105. Spring	
106. Mineral spring	
107. Cistern (in Central Asia)	
108. Cistern with tile superstructure	

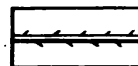
109. Corral _____	
110. Silo _____	
111. Apiary _____	
112. Isolated tree (coniferous) _____	
113. Isolated tree (deciduous) _____	
114. Forest under 6 meters in height _____	
115. Forest over 6 meters in height _____	
116. Isolated bush in steppe _____	
117. Forest service station _____	
118. Forest ranger's house _____	
119. International boundary with marker _____	
120. U.S.S.R. polar possession boundary _____	
121. U.S.S.R. boundary _____	
122. A.S.S.R. (oblast) boundary _____	
123. Autonomous oblast and kray boundary _____	
124. National okrug and administrative boundary _____	
125. Rayon boundary _____	
126. Okrug, uyezd boundary _____	
127. Telegraph and telephone line _____	
128. Submarine cable _____	

129. Electric line (low voltage) _____ 
130. High tension line _____ 
131. Gas conduit on ground _____ 
132. Petroleum conduit on ground _____ 
133. Stone wall over 1 meter in height _____ 
134. Stone or clay walls less than 1 meter in height _____ 
135. Wooden fence _____ 
136. Fence of brushwood _____ 
137. Hedge _____ 
138. Barbed wire fence _____ 
139. Artificial rampart (+2.5=relative height in meters) _____ 
140. (a) Trench; (b) Bunker; (c) Gangway _____ 
141. Dry trench (boundary between mines) _____ 
142. Three track railroad _____ 
143. Two track railroad _____ 
144. Single track railroad (roadbed for second track) _____ 
145. Single track railroad _____ 
146. Electrified double track railroad _____ 
147. Narrow gauge railroad _____ 
148. Horse-drawn tram line _____ 

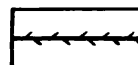
149. Electric street railroad _____	
150. Aerial cableway _____	
151. Proposed or planned railroad _____	
152. Railroad under construction _____	
153. Abandoned railroad _____	
154. Dead-end tracks (spurs) _____	
155. First class station _____	
156. Second class station _____	
157. Third class station _____	
158. Water tower _____	
159. Culvert _____	
160. Small bridge _____	
161. Large bridge _____	
162. Embankment _____	
163. Cut _____	
164. Level crossing _____	
165. Railroad underpass _____	
166. Railroad overpass _____	
167. Railroad tunnel _____	
168. Signalmen's huts _____	

169. State motor highway, with kilometer marker _____	
170. Improved highway (asphalt, tar, concrete), with kilometer marker _____	
171. Highway, paved street, with kilometer marker _____	
172. Highway, paved street (with traffic obstructions) _____	
173. Proposed highway (diagrammatically drafted) _____	
174. Highway under construction _____	
175. Metaled country road under construction _____	
176. Gravel and improved country road (former post and truck roads) _____	
177. Principal country road _____	
178. Country road _____	
179. Cattle path _____	
180. Road paved with wood, road for tractor _____	
181. Metaled highway on corduroy road and fascines _____	
182. Highway on corduroy road and fascines _____	
183. Dirt road, forest road _____	
184. Foot and bridle path, pack trail _____	
185. Caravan road _____	
186. Winter road _____	
187. Road with wood fence _____	
188. Road with stone wall _____	

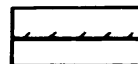
189. Gravel and improved country road (hedges both sides) _____



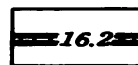
190. Road with hedges on both sides _____



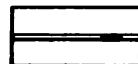
191. Road with hedge on one side _____



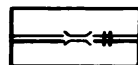
192. Road width _____



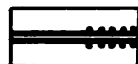
193. Grade over 10 percent _____



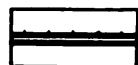
194. Bridge 2 or more lanes wide _____



195. Tree-lined road _____



196. Telephone line along road _____



197. Fill along road _____



198. Cut along road _____



199. Fire break, forest clearing _____



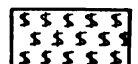
200. Park _____



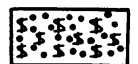
201. Orchard _____



202. Vineyard _____



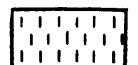
203. Garden of mixed vegetation _____



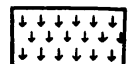
204. Vegetable garden _____



205. Hops _____



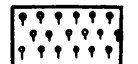
206. Rice _____




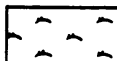

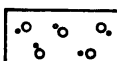

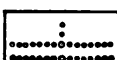
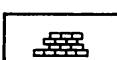
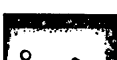

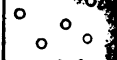
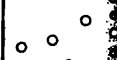

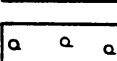
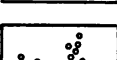
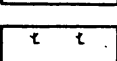
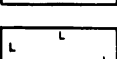
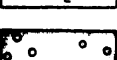


207. Cotton _____



208. Tea _____































209. Tobacco 
210. Kendyr (fibrous plant) 
211. Kenaf 
212. Saksaul (tree-like underbrush of Central Asia) 
213. Young forest plantation, tree nursery 
214. Small forest area at edge of steppe 
215. Narrow strip of forest 
216. Young trees up to 3 meters in height 
217. Peat bog (turbary) 
218. Coniferous forest 
219. Deciduous forest 
220. Mixed forest 
221. Transition from timber to copse or brushwood 
222. Brushwood, dwarf forest 
223. Sparse forest 
224. Dense undergrowth 
225. Burned-over area 
226. Logged-off area 
227. Gradual passage from forest to sparse forest, underbrush or meadow 


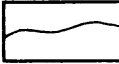
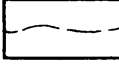
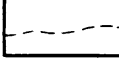
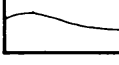
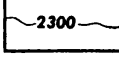

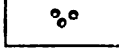
- | | |
|---|--|
| 228. Isolated graves as orientation points _____ | |
| 229. Swampy forest _____ | |
| 230. Impassable swamp with bushy growth _____ | |
| 231. Dwarf pine and knee timber (gnarled wood) _____ | |
| 232. Underbrush and black thorn _____ | |
| 233. Glade (4 = width in meters) _____ | |
| 234. Glade with ditch on both sides _____ | |
| 235. Glade with ditch on one side _____ | |
| 236. Glade bounded on both sides by hedges _____ | |
| 237. Path through glade (symbol for glade not drafted) _____ | |
| 238. Glade with telephone line through center or along side _____ | |
| 239. Glade with boundaries running parallel _____ | |
| 240. Meadow _____ | |
| 241. Swampy meadow _____ | |
| 242. Meadow with brushes _____ | |
| 243. Hillocks and small hills _____ | |
| 244. Hillocks in meadows _____ | |
| 245. Impassable swamp with reeds _____ | |
| 246. Almost impassable swamp (0.8 = depth in meters) _____ | |
| 247. Passable swamp _____ | |

248. Impassable salt marsh _____	
249. Passable salt marsh _____	
250. Salty steppes (solonchak) _____	
251. Stony steppes _____	
252. Grassy steppes _____	
253. Desert-like steppes _____	
254. Level sandy area _____	
255. Hilly dunes _____	
256. Crescent dunes (barchanes) _____	
257. Small shifting dunes, traveling dunes _____	
258. Tundras _____	
259. Mud cracks _____	
260. Dry ditch _____	
261. Ditches less than 3 meters wide _____	
262. Canalized river _____	
263. Ditches over 3 meters wide _____	
264. Ditch 3 meters wide and over, with tree cultivations _____	
265. Ditch between dams _____	
266. Towpath along canal _____	
267. Navigable canal _____	

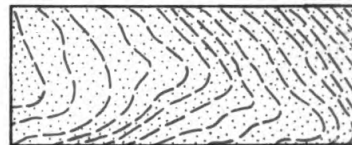
268. Brook, small river	
269. Intermittent stream	
270. Large intermittent stream	
271. Dry river bed	
272. Underground and dwindling streams	
273. Intermittent lake, liman (salty marsh near the sea)	
274. Rivers within marsh	
275. Bridge less than 10 meters long	
276. Bridge more than 10 meters long	
277. Bridge (numerator=length in meters; denominator=permissible load in tons)	
278. Ford (numerator=depth in meters; denominator=nature of bottom)	
279. Weir	
280. Retaining sluice	
281. Aqueduct	
282. Water holes	
283. Watermain	
284. Flood stage	
285. High and low tide gauges	
286. Jetty, dike, breakwater	
287. Shoal (depth in meters); Sand bank	

- | | | |
|--|---|-------|
| 288. Passenger ferry _____ |  | пер. |
| 289. Vehicle ferry _____ |  | пер. |
| 290. Wooden lock _____ |  | дер. |
| 291. Stone lock _____ |  | кам. |
| 292. Iron lock _____ |  | желе. |
| 293. Bridge on raft _____ |  | |
| 294. Pontoon bridge _____ |  | |
| 295. Wooden bridge _____ |  | |
| 296. Stone and ferro concrete bridge _____ |  | |
| 297. Iron bridge _____ |  | |
| 298. Wooden vertical lift or swing bridge _____ |  | |
| 299. Stone vertical lift or swing bridge _____ |  | |
| 300. Iron vertical lift or swing bridge _____ |  | |
| 301. Log dump _____ |  | |
| 302. Width of stream in meters _____ |  | |
| 303. Speed and direction of current _____ |  | |
| 304. Diversion dam _____ |  | |
| 305. Water level _____ |  | 92.6 |
| 306. Rapids _____ |  | |
| 307. Waterfall _____ |  | |
| 308. Swinging ferry _____ |  | |
| 309. Rowboat ferry _____ |  | |
| 310. Rowing ferry (2 = permissible load in tons) _____ |  | |
| 311. Cable ferry _____ |  | |
| 312. Wharf with buildings _____ |  | |
| 313. Whirlpool or eddy _____ |  | |
| 314. Anchorage _____ |  | |
| 315. Docks _____ |  | |

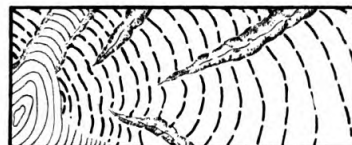


- | | |
|---|---|
| 316. Index contour _____ |  |
| 317. Intermediate contour _____ |  |
| 318. Auxiliary contour _____ |  |
| 319. Auxiliary contour _____ |  |
| 320. Hachure (indicating downward slope) _____ |  |
| 321. Elevation number on contour _____ |  |
| 322. Peak which cannot be represented by contours _____ |  |
| 323. Karst holes (sinkholes) _____ |  |

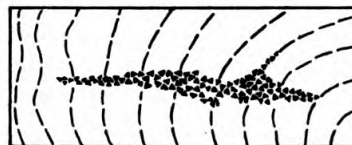
1. Eternal snow _____



2. Glacier _____



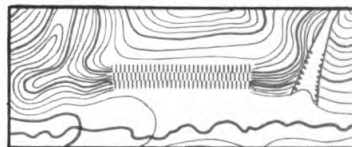
3. Glacier with moraine _____



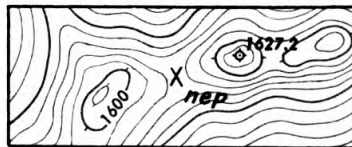
4. Cliffs _____



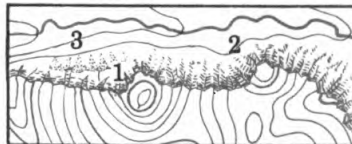
5. Steep slopes _____



6. Elevations of peaks and contours; Mountain pass _____



7. { 1. Earth slope, steep ledges
2. Rocky slope, steep ledges
3. Sandy and stony slope _____



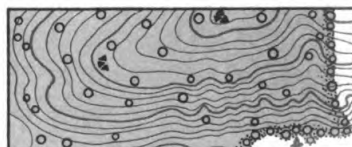
8. Narrow earth gorges and erosions _____



9. Earth gorges _____

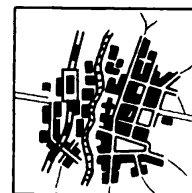


10. Forest on the mountains _____



**PART I
SECTION 4**

**SYMBOLS APPEARING ON
USSR MAPS AT THE SCALE
OF
1:200,000**



1. Large city _____



2. Small city _____



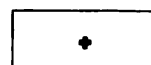
3. Industrial settlement _____



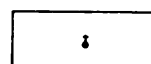
4. Village, state farms, collective farms, communes _____



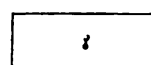
5. Cemetery _____



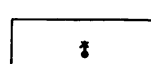
6. Church _____



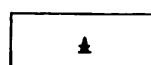
7. Chapel _____



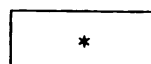
8. Mosque _____



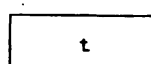
9. Synagogue _____



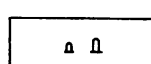
10. Temple _____



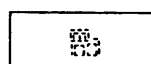
11. Burial mound _____



12. Cross _____



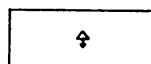
13. Monument _____



14. Ruin _____



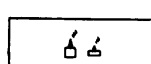
15. Shaft, pit, mine _____























16. Ore deposit (precious metal) _____




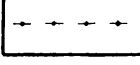
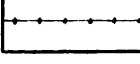
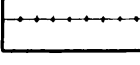
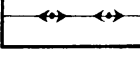
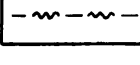

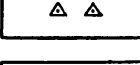

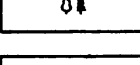
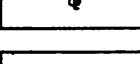
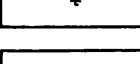
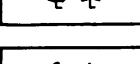
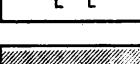
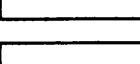
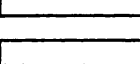

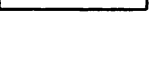



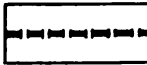
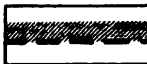
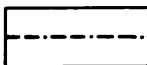
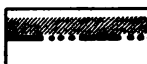
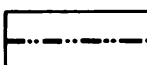
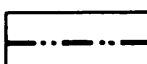
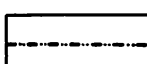
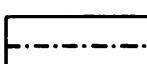
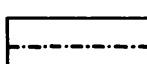
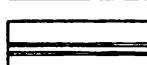
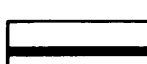
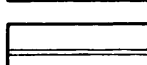
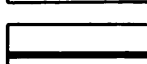
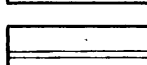
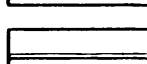
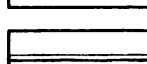
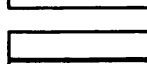
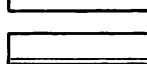
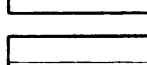
17. Factory with chimney _____

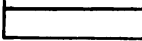
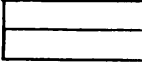
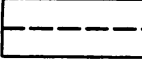
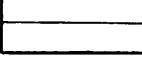
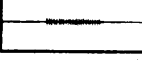
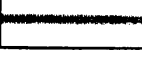
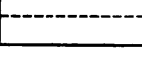
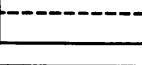
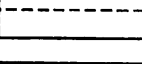
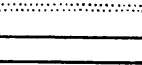
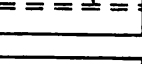
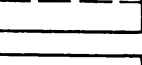
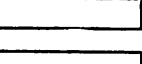
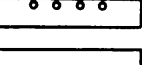
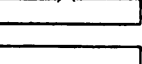
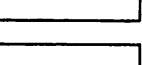
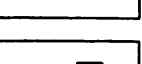
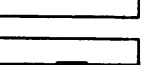
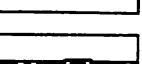




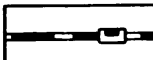
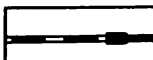
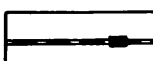
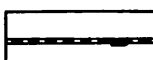

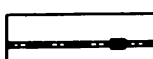

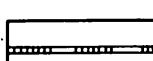
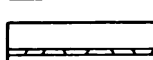
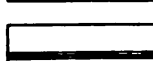
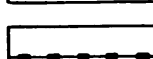

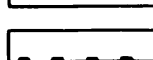
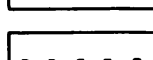
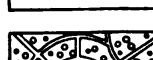
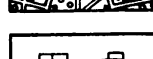
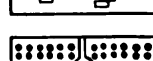


18. Factory with smoke stack _____

19. Factory without smoke stack _____	
20. Grain elevator _____	
21. Windmill _____	
22. Watermill _____	
23. Sawmill _____	
24. Fire station tower _____	
25. Water tower _____	
26. Airfield _____	
27. Meteorological station _____	
28. Electric station power plant _____	
29. Radio station _____	
30. Radio station less than 10 kw _____	
31. Radio station more than 10 kw _____	
32. Postal and telegraph station _____	
33. Postal and telegraph station _____	
34. Post office _____	
35. Post relay station _____	
36. Telegraph station _____	
37. Railroad telegraph office _____	
38. Custom office _____	

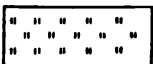
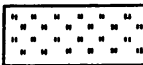
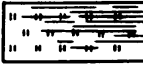
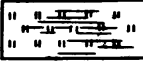
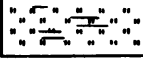



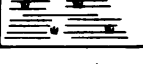



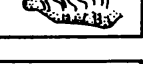
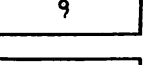
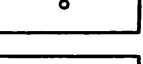
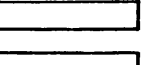
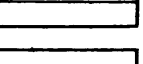
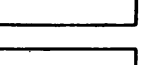
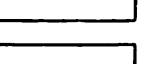

39. Motor and tractor station _____	
40. Forest service offices _____	
41. Forest keeper's house _____	
42. Telephone line _____	
43. Telegraph line _____	
44. Telephone and telegraph line _____	
45. High tension line _____	
46. Submarine cable _____	
47. Astronomical station _____	
48. Triangulation station _____	
49. Traverse station _____	
50. Isolated trees _____	
51. Deciduous forest _____	
52. Coniferous forest _____	
53. Timber forest _____	
54. Young forest _____	
55. International boundary _____	
56. International boundary _____	
57. International boundary _____	
58. Boundary of constituent republic _____	

59. Boundary of constituent republic _____	
60. Boundary of constituent republic _____	
61. Boundary of autonomous Soviet Republic and oblasts _____	
62. Boundary of autonomous Soviet Republic and oblasts _____	
63. Boundary of oblasts _____	
64. Boundary of oblasts and kragi _____	
65. Rayon boundary _____	
66. Guberniya boundary _____	
67. Boundary of national rayon _____	
68. Uyezd boundary _____	
69. Improved highway _____	
70. Improved highway _____	
71. State road or highway _____	
72. Hard surfaced improved highway _____	
73. Road, paved street _____	
74. Improved street _____	
75. Gravel road _____	
76. Gravel road _____	
77. Important post and transportation road _____	
78. Improved dirt road _____	

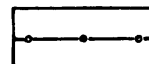
79. Improved dirt road _____	
80. Unimproved dirt road _____	
81. Country road _____	
82. Country road _____	
83. Corduroy road, fascine road _____	
84. Wooden block pavement _____	
85. Dirt, forest road _____	
86. Field and forest road _____	
87. Foot path, bridle path _____	
88. Winter road _____	
89. Caravan road _____	
90. Caravan road _____	
91. Fire break _____	
92. Road with trees _____	
93. Bridge _____	
94. Bridge _____	
95. Double track railroad with station _____	
96. Double track railroad with station _____	
97. Double track railroad with station _____	
98. Double track railroad with station _____	

- | | |
|--|---|
| 99. Single track railroad for two gauges _____ |  |
| 100. Single track railroad with halt _____ |  |
| 101. Single track railroad with loading ramp _____ |  |
| 102. Single track railroad with station _____ |  |
| 103. Narrow gauge railroad with siding _____ |  |
| 104. Narrow gauge railroad _____ |  |
| 105. Narrow gauge railroad with loading ramp _____ |  |
| 106. Narrow gauge railroad _____ |  |
| 107. Railroad under construction _____ |  |
| 108. Dismantled railroad _____ |  |
| 109. Electric street railway _____ |  |
| 110. Electric street railway _____ |  |
| 111. Street railroad (electric or horse drawn) _____ |  |
| 112. Cable and suspension railroad _____ |  |
| 113. Cable and suspension railroad _____ |  |
| 114. Park _____ |  |
| 115. Peet cuttings _____ |  |
| 116. Orchard _____ |  |
| 117. Vegetable garden _____ |  |
| 118. Vineyard _____ |  |

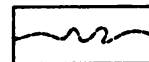
119. Shrubbery or underbrush	
120. Shrubbery or underbrush	
121. Shrubbery or underbrush	
122. Forest	
123. Sparse forest	
124. Sparse forest	
125. Burned-over forest	
126. Logged-off area	
127. Level sand	
128. Level sand	
129. Hilly sand	
130. Hilly sand	
131. Sand dunes	
132. Cleared meadowland	
133. Cleared meadowland	
134. Index contour	
135. Intermediate contour	
136. Ten-meter auxiliary contour	
137. Form line	
138. Gorge, ravine or escarpment	

139. Cleared meadowland	
140. Cleared meadowland	
141. Wet meadowland	
142. Wet meadowland with underbrush	
143. Wet meadowland	
144. Hummock	
145. Hummock	
146. Reeds	
147. Swamp and reeds	
148. Impassable swamp	
149. Passable swamp	
150. Salt swamp	
151. Glacier	
152. Spring	
153. Well	
154. Navigable canal	
155. Towpath	
156. Canal, navigable for rafts	
157. Water conduit above ground	
158. Underground water conduit	

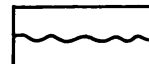
159. Underground conduit with water holes _____



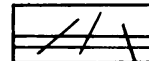
160. Intermittent river _____



161. Canalized river _____



162. Ditches _____



163. Land subject to inundation _____

164. Ford _____

165. Passenger ferry _____

166. Vehicle ferry _____

167. Lock _____

168. Rapids and falls _____

169. Pontoon bridge _____

170. Wooden bridge _____

171. Stone bridge _____

172. Iron bridge _____

173. Drawbridge or swinging bridge _____

174. Landing _____

175. Direction of current _____

176. Buoy _____

177. Light tower _____

178. Pilot sign, signal light _____

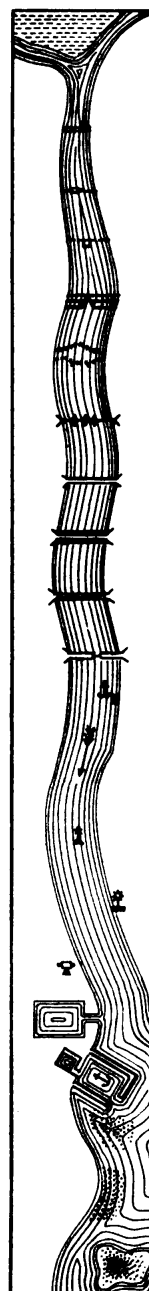
179. Harbor basin _____

180. Dock, harbor _____

181. Sand bank _____

182. Shoal _____










183. Sand island _____




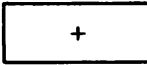


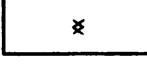
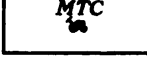
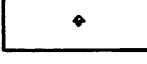
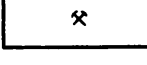

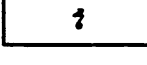
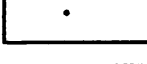

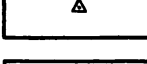
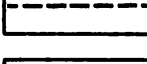
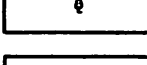
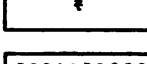


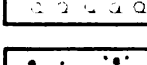
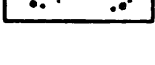
**PART I
SECTION 5**

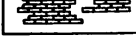
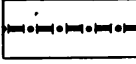
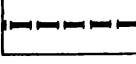
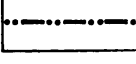
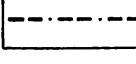
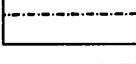
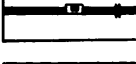
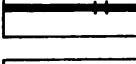
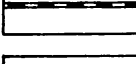

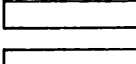
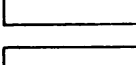
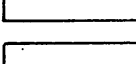
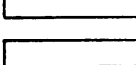
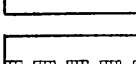
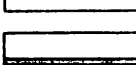
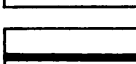
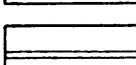
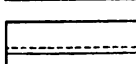

**SYMBOLS APPEARING ON
USSR MAPS AT THE SCALE
OF
1:500,000**

The symbolization appearing on pages 67 to 70 inclusive is that of the GUGK and since 1939 is the standard for USSR maps at the scale of 1:500,000. The symbolization appearing on pages 71 to 74 inclusive is that appearing on maps drafted prior to 1939 by NKVD, the Peoples' Commissariat of the Interior.

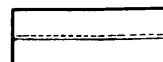
1. Capital city _____ ПРАГА  849
2. Capital of constituent republic _____ КИЕВ 
3. Capital of guberniya, oblast and autonomous republic _____ ●
4. Capital of autonomous oblast _____ ●
5. Capital of okrug _____ ○
6. Capital of rayon _____ ○
7. City of 50,000 or more _____ ОДЕССА  497
8. Important traffic center _____ ФАСТОВ 
9. City of 10,000 to 50,000 _____ НЕЖИН 
10. City of less than 10,000 _____ ЩОРС 
11. Industrial settlement and city-type settlement of more than 10,000 _____ МЧНЯ 
12. City-type settlement of less than 10,000 _____ МЕЖА 
13. Locality of more than 1,000 _____ Селище 
14. Locality of 100 to 1,000 _____ Зубки ○
15. Locality of less than 100 _____ Вильхес ○
16. Estate, farm, state farm _____ Сел. Ворсимо ■

NOTE: Figures under place names give the number of inhabitants in thousands.

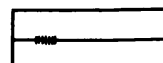
17. Large industrial plant, factory _____	
18. Monastery, church _____	
19. Office of forest service _____	
20. Elevator _____	
21. Telephone and telegraph station _____	
22. Truck and tractor station _____	
23. Ore deposit (precious metal) _____	
24. Mine _____	
25. Air field _____	
26. Radio station _____	
27. Spot elevation _____	
28. Astronomic point _____	
29. Trigonometric point _____	
30. Isogonic line _____	
31. Deciduous tree _____	
32. Coniferous tree _____	
33. Garden _____	
34. Forest with glade _____	
35. Sparce forest _____	
36. Brushwood _____	

- | | |
|---|---|
| 37. Peat cuttings _____ |  |
| 38. International boundary _____ |  |
| 39. Constituent republic boundary _____ |  |
| 40. Guberniya, oblast, autonomous republic boundary _____ |  |
| 41. Autonomous oblast boundary _____ |  |
| 42. Rayon boundary _____ |  |
| 43. Double track railroad with station _____ |  |
| 44. Single track railroad _____ |  |
| 45. Narrow gauge railroad _____ |  |
| 46. Electrified railroad _____ |  |
| 47. Street railway _____ |  |
| 48. Railroad under construction _____ |  |
| 49. Dismantled railroad _____ |  |
| 50. Motor highway _____ |  |
| 51. Motor highway under construction _____ |  |
| 52. Motor highway projected _____ |  |
| 53. Highway _____ |  |
| 54. Highway _____ |  |
| 55. Highway under construction _____ |  |
| 56. Improved road _____ |  |

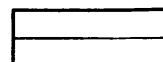
57. Improved road _____



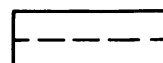
58. Country road _____



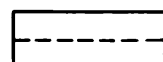
59. Country road _____



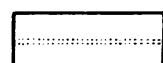
60. Country road in poor condition _____



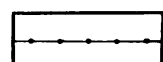
61. Foot and bridle path _____



62. Winter road _____



63. Telephone and telegraph line _____



64. Sand area _____



65. Contours; Ravines; Precipice _____



66. Salt marsh, salt pan _____



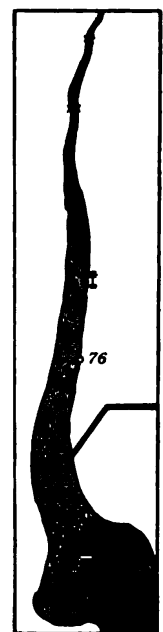
67. Swamp _____



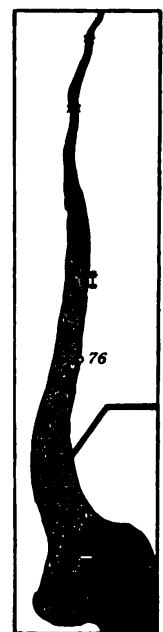
68. Probable flooded area _____



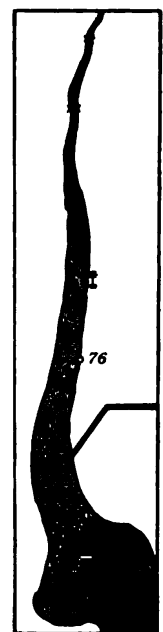
69. Iron bridge _____



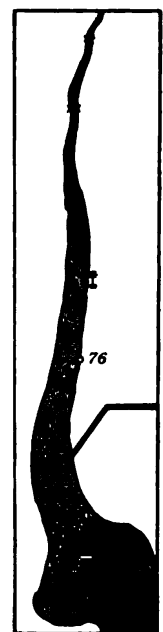
70. Wooden bridge _____



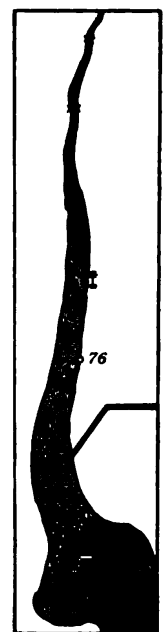
71. Ferry _____



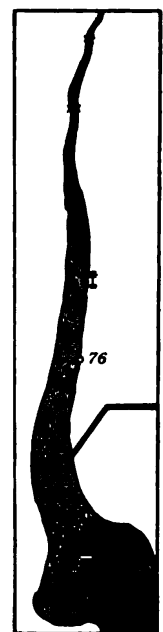
72. Lighthouse tower _____



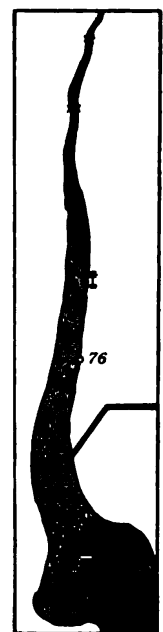
73. Water level _____



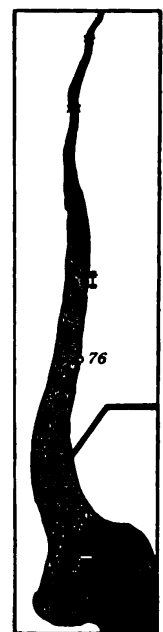
74. Navigable canal _____














75. Anchorage _____

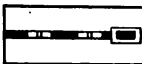

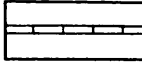
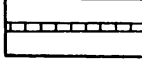
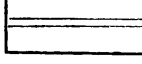
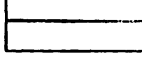
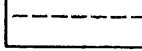


76. Seaport _____


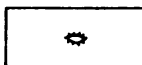

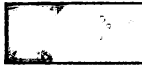



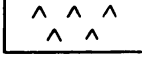






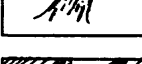

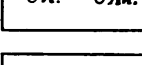
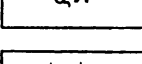
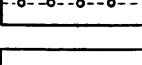
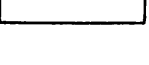



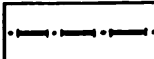
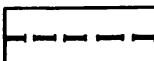
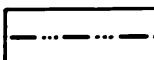
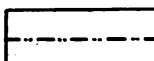
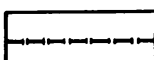
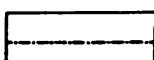
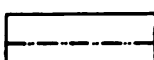
1. City over 100,000 population _____ **СТАЛИНСК** 
2. City 50,000 to 100,000 population _____ **ПАВЛОВСК** 
3. City 10,000 to 50,000 population _____ **ПЕТРОПАВЛОВСК** 
4. City less than 10,000 population _____ **БЕЛЫЙ АНУЙ** 
5. Industrial settlement _____ **АБАКАКСКИЙ** 
6. Suburb, villa _____ **ОТРАДНОЕ** 
7. City-type settlement, more than 500 population _____ **ДЕРБИНСКОЕ** 
8. City-type settlement, 100-500 population _____ **Боровое** 
9. City-type settlement, less than 100 population _____ **Карагайлы** 
10. Farm buildings, summer quarters, isolated farm _____ **Лыжово** 
11. State farm _____ **Сен.Совт** 

NOTE: The political importance of the inhabited places is indicated by means of underlining. Size and style of type indicates the approximate population.

12. Double track railroad with station _____ 
13. Single track railroad with station _____ 
14. Railroad under construction _____ 
15. Projected railroad _____ 
16. Improved road _____ 
17. Country road _____ 
18. Foot path, bridle path _____ 

19. Winter road _____	
20. Caravan route _____	
21. Glade _____	
22. Telephone station _____	
23. Post and telegraph office _____	
24. Post office _____	
25. Telephone and telegraph line _____	
26. Forester's office _____	
27. Truck and tractor station _____	
28. Radio station _____	
29. Mine _____	
30. Pit _____	
31. Astronomic point _____	
32. Apiary _____	
33. Deciduous forest _____	
34. Coniferous forest _____	
35. Mosque _____	
36. Idol's temple _____	
37. Nomad grave _____	
38. Grain elevator _____	








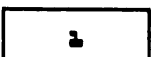
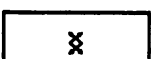

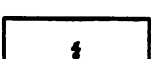


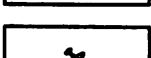
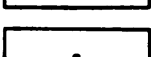
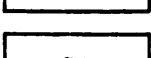
39. Customs office _____	
40. Prehistoric barrow _____	
41. Forest _____	
42. Brushwood; Small tract woodland; Edge of steppe _____	
43. Passable swamp _____	
44. Impassable swamp with reeds _____	
45. Salt marsh _____	
46. Steppes _____	
47. Slopes; Depressions; Earth ravines; Erosions _____	
48. Level sandy area _____	
49. Hilly sandy area _____	
50. Dunes _____	
51. Traveling dunes _____	
52. Mountain peak with snow _____	
53. Glacier and moraine _____	
54. Cliffs; Steep inclines _____	
55. Well; Artisian well _____	
56. Spring _____	
57. Water holes _____	
58. Canals for log floating and irrigation _____	





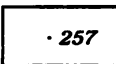
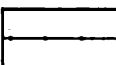
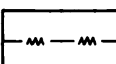
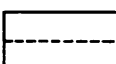
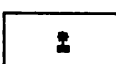



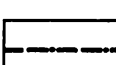
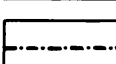
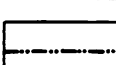
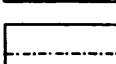
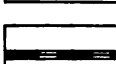
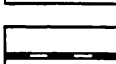


59. International boundary _____ 
60. Boundary of constituent republic _____ 
61. Boundary of autonomous republic _____ 
62. Boundary of oblast and kray _____ 
63. Okrug boundary _____ 
64. Okrug boundary _____ 
65. Rayon boundary _____ 
66. Rayon boundary _____ 

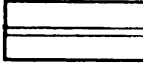
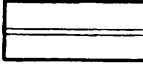
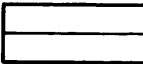
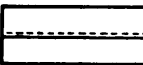
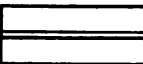
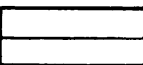
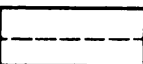
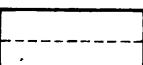
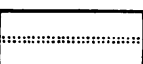
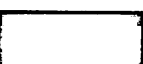
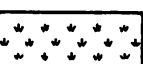









**PART I
SECTION 6**

**SYMBOLS APPEARING ON
USSR MAPS AT THE SCALE
OF
1:1,000,000**

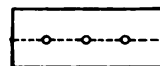
Pages 70 to 80 inclusive contain the symbolization for the standard USSR 1:1,000,000 sheets. Pages 81 and 82 contain the symbolization used on the 1:1,000,000 Aviation Charts and page 83 shows the symbolization appearing on the 1:1,000,000 Aerial Navigation Charts.

1. Capital city _____ **МОСКВА** 
2. Capital of constituent republic, guberniya, oblast and autonomous republic not constituting a part of the guberniya _____ **МИНСК** 
3. Capital of guberniya, oblast and autonomous republic _____ **ПЕНЗА** 
4. Capital of autonomous oblast, oblast constituting a part of the guberniya, and city having over 75,000 inhabitants _____ **МУРОМ** 
5. Capital of okrug, national okrug and city of less than 75,000 inhabitants _____ **ПУЗАЕВКА** ●
6. Market town, industrial settlement, village with church as rayon center _____ **КУРМЫШ** ◎
7. Village with church _____ **Сосновка** ○
8. Farm and buildings (part of manor) _____ **Хутора** ■
9. Large industrial plant _____ 
10. Factory _____ 
11. Church _____ 
12. Customhouse and custompost _____ 
13. Post office and telegraph office _____ 
14. Post relay station _____ 
15. Radio station _____ 
16. Mine _____ 
17. Pit _____ 
18. Airfield _____ 
19. Monument _____ 
20. Ruin _____ 

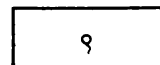
21. Prehistoric barrow _____	
22. Burial mound _____	
23. Trigonometric point _____	
24. Astronomical point _____	
25. Spot elevation _____	
26. Telegraph line _____	
27. Underwater cable _____	
28. Steamship line _____	
29. Lighthouse tower _____	
30. Seaport _____	
31. International boundary _____	
32. Constituent republic boundary _____	
33. Guberniya, oblast, autonomous republic boundary _____	
34. Autonomous oblast boundary _____	
35. Kray and oblast boundary _____	
36. Rayon boundary _____	
37. Double track railroad _____	
38. Single track railroad _____	
39. Narrow gauge railroad _____	
40. Railroad under construction _____	

41. Highway	
42. Transportation and post road	
43. Transportation and post road	
44. Improved road (gravel)	
45. Improved road (gravel)	
46. Country road	
47. Caravan route	
48. Foot and bridle path	
49. Winter road	
50. Woods	
51. Reeds	
52. Contours	
53. Sandy area	
54. Steep incline	
55. Glacier	
56. Swamp	
57. Salt marsh	
58. Bathymetric contours	
59. Navigable canal	
60. Non-navigable canal	

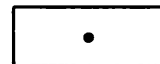
61. Waterholes



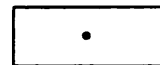
62. Spring



63. Well



64. Well



65. Bridge



66. Ferry (passenger and vehicle)




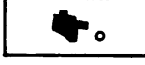


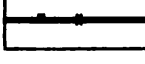
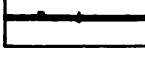
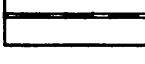
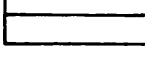
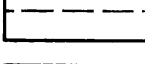
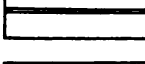
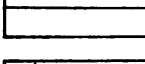
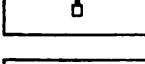
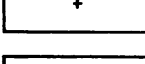
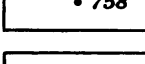
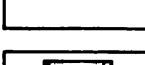
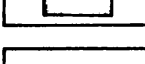
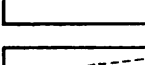
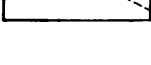


67. Anchorage

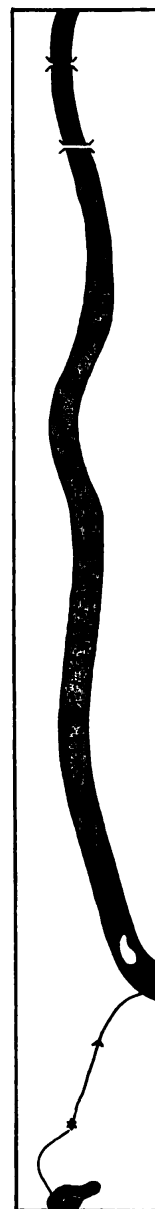






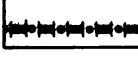
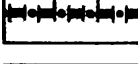
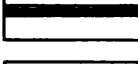
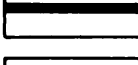
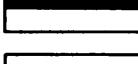
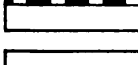
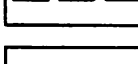
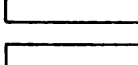

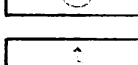

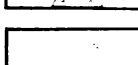
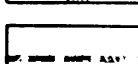
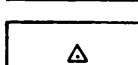
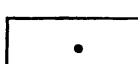

68. Rapids, waterfall



1. Large city _____	
2. Small city _____	
3. Settlement, market town _____	
4. Other inhabited place _____	
5. Isolated farm _____	
6. International boundary _____	
7. Railroad (two or more tracks) with station _____	
8. Single track railroad with station _____	
9. Narrow gauge railroad _____	
10. Highway _____	
11. Highway under construction _____	
12. Improved road _____	
13. Country road _____	
14. Factory, plant _____	
15. Church _____	
16. Spot elevation _____	
17. Isogonic line _____	
18. Forest _____	
19. Intermittent stream _____	
20. Unsurveyed stream _____	

21. Iron bridge _____
22. Wooden bridge _____
23. Rapids _____
24. Large rapids _____
25. Waterfall _____
26. Lock _____
27. Ford for horses _____
28. Ford for pedestrians _____
29. Vehicle ferry _____
30. Passenger ferry _____
31. Anchorage _____
32. Sand bank _____
33. Beginning of floatability (for logs) _____
34. Watermill _____
35. Lake _____



1. Large inhabited place and important traffic center _____	
2. Other city and traffic center, second class _____	
3. Large settlement, market town _____	
4. Village, small settlement _____	
5. International boundary _____	
6. Place in boundary open to aviation _____	
7. Double track railroad _____	
8. Single track railroad _____	
9. Single track railroad with roadway for second track _____	
10. Narrow gauge railroad _____	
11. Railroad under construction _____	
12. Highway _____	
13. Main dirt road _____	
14. Airfield _____	
15. Airfield with radio station _____	
16. Landing field _____	
17. Prohibited zone _____	
18. Isogonic line _____	
19. Trigonometric point _____	
20. Geometric point _____	

PART II

IMPERIAL RUSSIAN MAPS

Maps made by the Czarist topographers contribute little of value to the field of cartography. While some sheets are the results of accurate planetable surveys, the vast majority are crudely compiled and as a whole can be considered as of poor reliability. The Czarist symbolization is included since the maps comprise the only available coverage in many areas not as yet remapped by the Soviets.

The small scale sheets (1:420,000, 1:126,000, and 1:84,000) are constructed on the Bonne Projection, based on an arbitrary grid whose central meridian is 10° East of Pulkovo.

The one Verst Map* (1:42,000) and the Half Verst Map (1:21,000) are bounded by true parallels and meridians and are based on the Meridian of Pulkovo, 30°19'38.55" East of Greenwich. The 1:42,000 sheets are 10' NS x 15' EW; the 1:21,000 sheets are 5' NS x 7'30" EW.

All the scales except the 1:21,000 and the 1:126,000 were generally printed in color: culture, black; hydrography, blue; hypsography, brown; and woodland, green. The 1:21,000 and 1:126,000 sheets usually appeared as monochromes, although some were printed in the standard colors.

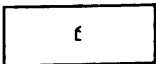
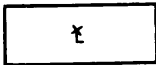
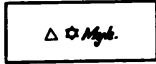
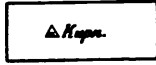
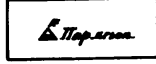


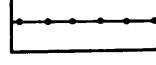
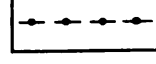
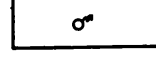
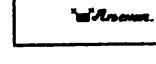
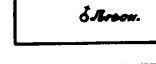


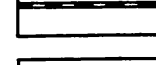
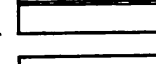

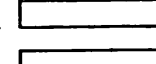
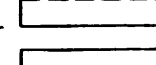
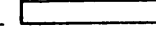
The symbolization for maps at the scales of 1:21,000, 1:42,000, 1:84,000, 1:126,000 and 1:420,000 appear in Section 1, Section 2, Section 3, Section 4 and Section 5, respectively.

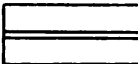
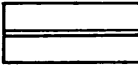
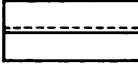
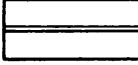
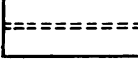
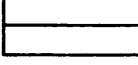
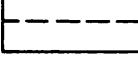
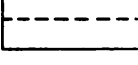
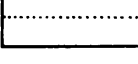
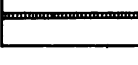
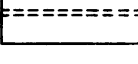
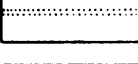

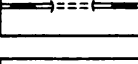
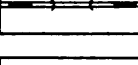
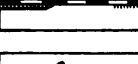

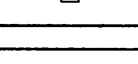
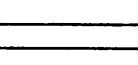
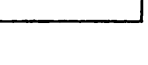
* One Verst=500 sazhen=3500 feet=.6629 miles=1.067 kilometers.

**PART II
SECTION 1**

**SYMBOLS APPEARING ON
IMPERIAL RUSSIAN MAPS
AT THE SCALE
OF
1:21,000
(HALF VERST MAP)**

1. Stone church _____	
2. Wooden church _____	
3. Stone synagogue; Wooden synagogue _____	
4. Stone mosque; Wooden mosque _____	
5. Stone chapel; Wooden chapel _____	
6. Stone monastery; Wooden monastery _____	
7. Christian cemetery _____	
8. Non-Christian cemetery _____	
9. Saint's image, shrine _____	
10. Cross _____	
11. Castle _____	
12. Ruin _____	
13. Monument _____	
14. Estate _____	
15. Farm _____	
16. Factory with chimney _____	
17. Factory _____	
18. Inn _____	
19. Mine _____	
20. Apiary _____	

21. Sign post _____	
22. Windmill _____	
23. Watermill _____	
24. Brickworks _____	
25. Saw mill _____	
26. Post-telegraph office _____	
27. Post-telegraph station _____	
28. Telegraph line _____	
29. Telephone line _____	
30. Radio station _____	
31. Forester's house _____	
32. Ranger's house _____	
33. Isolated, landmark trees _____	
34. Multiple track railroad _____	
35. Single track railroad _____	
36. Narrow gauge railroad _____	
37. Single track railroad (bed for 2 tracks) _____	
38. Railroad under construction _____	
39. Street railroad with telephone line _____	
40. State highway, first class, with telegraph lines _____	

41. Road, second class _____	
42. Post road, maintained _____	
43. Post road, not maintained _____	
44. Connecting road (ditch on 1 side) in good condition _____	
45. Connecting road (ditch on 1 side) in poor condition _____	
46. Connecting road in good condition _____	
47. Connecting road in poor condition _____	
48. Field road _____	
49. Foot path _____	
50. Embankment and fascine road _____	
51. Winter road _____	
52. Woodland clearing _____	
53. Verst post; Bridge _____	
54. Tunnel _____	
55. Iron bridge _____	
56. Cut and embankment _____	
57. Station _____	
58. Halt; Watchman's house _____	
59. International boundary _____	
60. Provincial boundary _____	

61. Halt; Watchman's house	
62. International boundary	
63. Provincial boundary	
64. District (Oblast) boundary	
65. Pasture, meadow	
66. Sand, gravel	
67. Vineyard; Hop field	
68. Vegetable garden; Fruit orchard	
69. Park	
70. Brushwood, copse	
71. Forest with forest road and indication of type of forest	
72. Logged-off area	
73. Burned-over forest; Sparse forest	
74. Wall	
75. Fence	
76. Wire or board fence	
77. Hedge	
78. Embankment	
79. Ravine	
80. Depression; Mounds	

81. Spring, well _____	
82. Narrow wet ditch _____	
83. Impassable ditch _____	
84. Grassy swamp; Wooded swamp _____	
85. Swamp without vegetation; Swamp with reeds _____	
86. Swamp with peat cuttings _____	
87. Stone lock; Wooden lock _____	
88. Rapids _____	
89. Ferry _____	
90. Ford for horses _____	
91. Ford for pedestrians _____	
92. Wooden bridge _____	
93. Raft or floating bridge _____	
94. Pontoon bridge _____	
95. Iron bridge _____	
96. Whirlpool, eddy _____	
97. Direction of current _____	
98. Astronomical point (fixed in sazhen'-sazhen'= 7 feet) _____	
99. Triangulation point (fixed in sazhen'-sazhen'= 7 feet) _____	
100. Bench mark (fixed in sazhen'-sazhen'= 7 feet) _____	



Δ 100.5



101. Anchorage _____



102. Fortification _____



103. Post _____

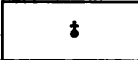
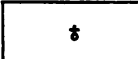
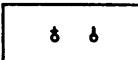
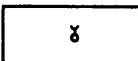
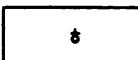
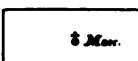
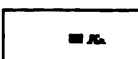
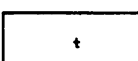
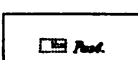

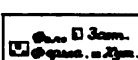
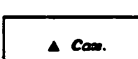
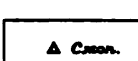
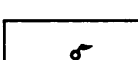
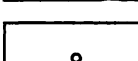

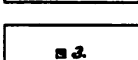
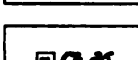
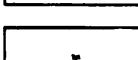
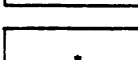


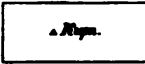

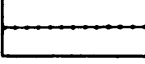

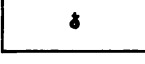

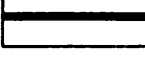
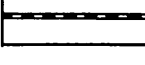
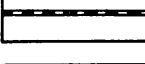
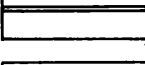
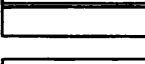
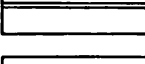
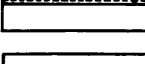
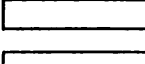
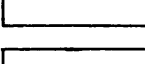
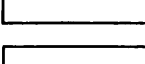
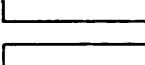
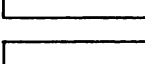
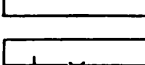
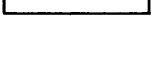
104. Customs office _____


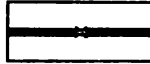
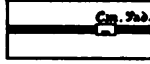
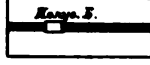
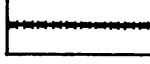
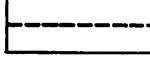
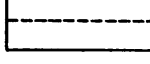
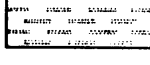

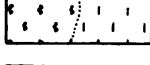


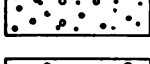
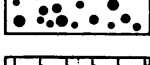
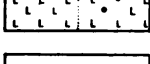
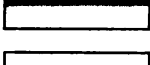

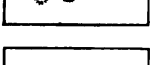
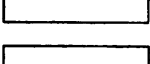
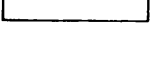






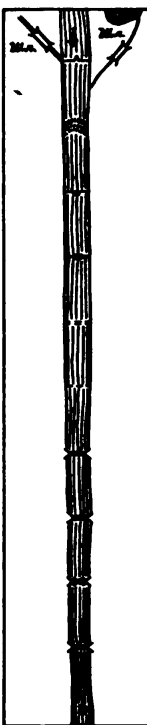
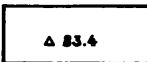
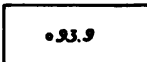

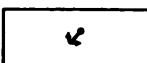
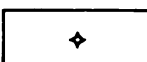
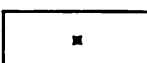
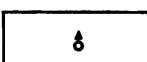
**PART II
SECTION 2**

**SYMBOLS APPEARING ON
RUSSIAN IMPERIAL MAPS
AT THE SCALE
OF
1:42,000
(ONE VERST MAP)**

1. Stone church _____	
2. Wooden church _____	
3. Synagogue _____	
4. Mosque _____	
5. Chapel _____	
6. Monastery _____	
7. Cemetery _____	
8. Cross _____	
9. Ruin _____	
10. Estate _____	
11. Farm _____	
12. Factory _____	
13. Factory _____	
14. Inn _____	
15. Mine _____	
16. Apiary _____	
17. Single farm _____	
18. Shelter, stable _____	
19. Windmill _____	
20. Watermill _____	

21. Brickworks _____	
22. Post-telegraph office _____	
23. Telegraph-telephone line _____	
24. Forester's house _____	
25. Ranger's house _____	
26. Multiple track railroad _____	
27. Single track railroad _____	
28. Narrow gauge railroad _____	
29. Railroad under construction _____	
30. State highway, first class _____	
31. Post road, maintained _____	
32. Post road, not maintained _____	
33. Connecting road with ditch on inside _____	
34. Connecting road _____	
35. Field road _____	
36. Foot path _____	
37. Embankment and fascine road _____	
38. Winter road _____	
39. Woodland clearings _____	
40. Verst post; Bridge _____	

41. Tunnel	
42. Iron bridge	
43. Station	
44. Halt	
45. International boundary	
46. Provincial boundary	
47. District (Oblast) boundary	
48. Pasture, meadow	
49. Sand, gravel	
50. Vineyard; Hop field	
51. Vegetable garden; Fruit orchard	
52. Park	
53. Brushwood, copse	
54. Forest	
55. Logged-off area	
56. Embankment	
57. Ravine	
58. Mounds	
59. Well, spring	
60. Narrow wet ditch	

61. Impassable ditch _____	
62. Grassy swamp; Wooded swamp _____	
63. Swamp without vegetation; Swamp with reeds _____	
64. Swamp with peat cuttings _____	
65. Locks; Direction of current _____	
66. Rapids _____	
67. Ferry _____	
68. Ferry _____	
69. Ford for horses _____	
70. Ford for pedestrians _____	
71. Wooden bridge _____	
72. Bridge on raft (floating bridge) _____	
73. Pontoon bridge _____	
74. Iron bridge _____	
75. Whirlpool, eddy _____	
76. Triangulation point (fixed in sazhen'-sazhen' = 7 feet) _____	
77. Spot height (fixed in sazhen'-sazhen' = 7 feet) _____	
78. Hachures _____	
79. Anchorage _____	
80. Fortification _____	
81. Post _____	
82. Customs office _____	

**PART II
SECTION 5**

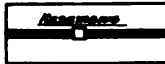
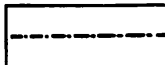
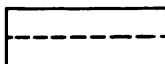
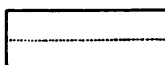


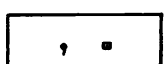
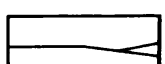
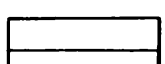

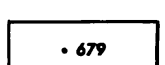

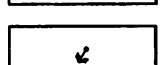
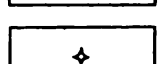
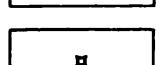
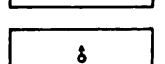




**SYMBOLS APPEARING ON
IMPERIAL RUSSIAN MAPS
AT THE SCALE
OF
1:420,000
(TEN VERST MAP)**



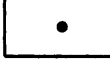
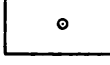
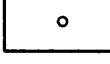

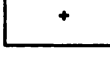
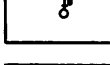
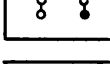
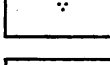
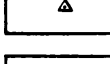
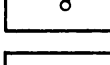
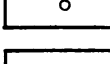
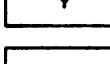
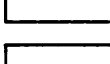
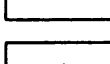
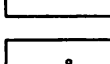
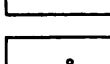
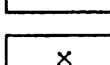
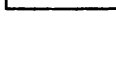
The symbols appearing on pages 119 and 120 were taken from the German made symbol book of Russian maps. Those on pages 121 and 122 are additional symbols found as a result of a study of original maps.

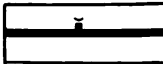
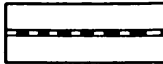

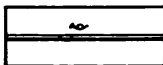
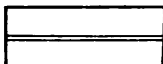
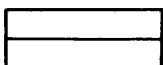
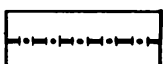
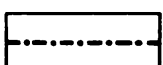
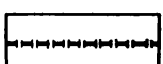
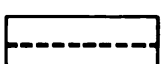
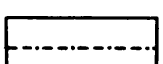
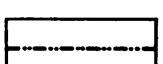
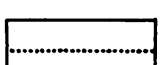



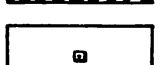
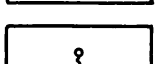
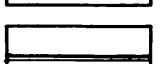
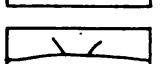
IMPERIAL RUSSIAN MAPS
1:420,000

119

1. Stone church _____	
2. Wooden church _____	
3. Synagogue _____	
4. Mosque _____	
5. Chapel _____	
6. Monastery _____	
7. Estate _____	
8. Farm _____	
9. Factory _____	
10. Factory _____	
11. Inn _____	
12. Post-telegraph office _____	
13. Multiple track railroad _____	
14. Single track railroad _____	
15. Railroad under construction _____	
16. State highway, first class _____	
17. Post road, maintained _____	
18. Post road, not maintained _____	
19. Connecting road _____	
20. Verst post; Bridge _____	

21. Railroad station and siding _____	
22. International boundary _____	
23. Provincial boundary _____	
24. District boundary _____	
25. Sand and gravel _____	
26. Woods _____	
27. Spring; Well _____	
28. Narrow wet ditch _____	
29. Impassable ditch _____	
30. Double-line stream _____	
31. Spot height (fixed in sazhen'-sazhen' = 7 feet) _____	
32. Hachures _____	
33. Anchorage _____	
34. Fortification _____	
35. Post _____	
36. Customs office _____	
37. Grassy swamp; Wooded swamp _____	
38. Sizeable marshes _____	
39. Salt ground (field) _____	
40. Salt marsh (swamp) _____	

1. Large town _____	
2. Small town _____	
3. Settlement, village (10-20 homesteads) _____	
4. Settlement, village (3-5-10 homesteads) _____	
5. Manor house, farm, winter camp _____	
6. Church _____	
7. Chapel _____	
8. Monastery _____	
9. Mosque _____	
10. Factory _____	
11. Mill _____	
12. Inn _____	
13. Customs post _____	
14. Fortress, rampart _____	
15. Post, picket _____	
16. Grave, burial mound _____	
17. Lighthouse _____	
18. Anchorage _____	
19. Anchorage _____	
20. Telephone-telegraph line with station _____	

21. Railroad _____	
22. Railroad under construction _____	
23. Highway with post station _____	
24. Mail road with post station _____	
25. Through trade road _____	
26. Dirt road _____	
27. International boundary _____	
28. International boundary _____	
29. A. S. S. R. boundary (on USSR revised sheets) _____	
30. A. S. S. R. boundary (on USSR revised sheets) _____	
31. Autonomous, oblast or rayon boundary (on USSR revised sheets) _____	
32. Kray or oblast boundary (on USSR revised sheets) _____	
33. Okrug boundary (on USSR revised sheets) _____	
34. Sand _____	
35. Salt marsh _____	
36. Mineral salt lake _____	
37. Well _____	
38. Spring _____	
39. Canal _____	
40. Ditch _____	

PART III

GERMAN MAPS

Prior to and during World War II, the Germans obtained numerous Sovietmade maps. Some were reprinted without change; others were revised by the Office of the Chief of Military Maps before publication. Various preparation methods were employed for the revisions, depending upon urgency and source material available. Large scale maps were sometimes used to compile medium scale sheets. In many cases planimetric revisions were made from aerial photography.

On the revised sheets Russian place names have been transliterated into German. In most cases road classifications were revised according to German standards which emphasize trafficability for military loads.

The symbolization for the German 1:200,000 sheets is explained in Section 1. The sheets are reproduced in various sizes. Some follow the Soviet standards of 40' NS x 1° EW, 40' NS x 2° EW, or 1°20' NS x 2° EW. Others are sized 1°20' NS x 3° EW or 1° NS x 1°30' EW.

The symbolization for the German 1:300,000 sheets is explained in Section 2. Most of these sheets have been compiled from large scale Russian sources with revisions made from aerial photography and road classifications revised according to the German system from intelligence data.

The sheets usually are 1° NS x 2° EW. Some larger sheets have also been prepared which are approximately 1°37' NS x 3°34' EW.





















The German maps are generally considered to possess a higher degree of reliability than Russian maps of the same area.

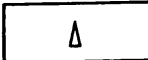
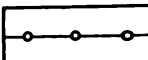
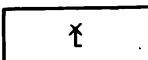
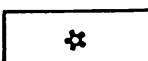
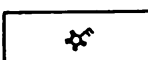
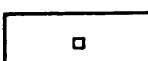
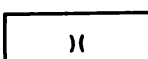
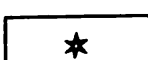
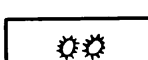

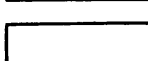
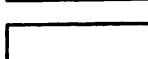

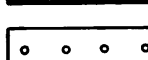
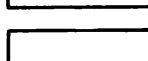


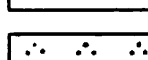
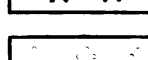

**PART III
SECTION 1**






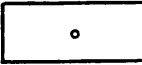

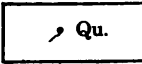



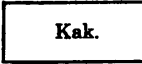
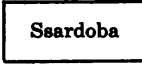

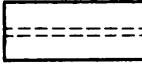
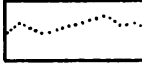
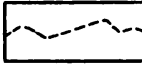



**SYMBOLS APPEARING ON
GERMAN REVISED RUSSIAN MAPS
AT THE SCALE
OF
1:200,000**

GERMAN MAPS
1:200,000

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1. Cross	
2. Church	
3. Chapel	
4. Mosque	
5. Buddhist temple	
6. Winter hut	 Wint. H.
7. Nomad camp	
8. Collective farm	
9. Factory	
10. Factory	
11. Tractor station	
12. Radio station	
13. Customs office	
14. Signpost	
15. Fortification	
16. Airfield	
17. Mine shaft	
18. Mine (common metals)	
19. Mine (precious metals or salt)	
20. Mine (coal)	

21. Oil derrick	
22. Oil pipeline	
23. Wind mill	
24. Water mill	
25. Saw mill	
26. Sheep fold	
27. Pass	
28. Artificial hill, burial mound	
29. Natural hill	
30. Woods, forest (dense)	
31. Woods, forest	
32. Woods, forest	
33. Sparse forest	
34. Sparse forest	
35. Sparse young forest	
36. Underbrush (dense)	
37. Underbrush	
38. Underbrush	
39. Underbrush	
40. Orchard	

41. Garden	
42. Rice	
43. Snow-capped peak	
44. Glacier	
45. Well	
46. Dry well	
47. Chain (draw) well	
48. Spring	
49. Waterhole	
50. Cistern	
51. Covered cistern	
52. Cistern	
53. Covered cistern	
54. Navigable canal	
55. Dry river bed	
56. Intermittent stream	
57. Intermittent stream	
58. Head of navigation	
59. Head of navigation	
60. Vehicle ferry on small stream	

61. Rapids _____

62. Rapids _____

63. Waterfall _____

64. Waterfall _____

65. Lock _____

66. Ford for horses _____

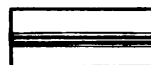
67. Ford for pedestrians _____

68. Vehicle ferry _____

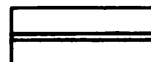
69. Passenger ferry _____



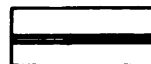
70. Main traffic highway, from roadbed, hard surface _____



71. Vehicle highway, hard surface, not special roadbed _____



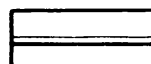
72. Vehicle highway, hard surface, not special roadbed _____



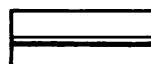
73. Vehicle highway, hard surface, not special roadbed, under construction _____



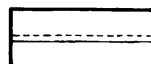
74. Improved vehicle road, maintained communication road _____



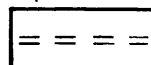
75. Improved vehicle road, maintained communication road _____



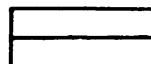
76. Improved vehicle road, poorly maintained communication road _____



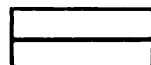
77. Road under construction _____



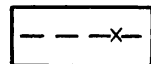
78. Maintained country road _____



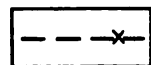
79. Maintained country road _____



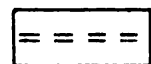
80. Dirt road, forest road (with pass) _____

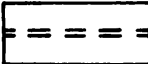
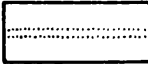

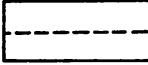


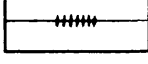
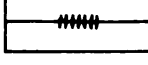
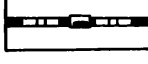
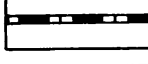

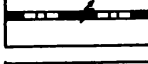
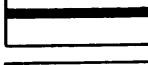
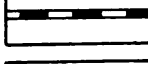
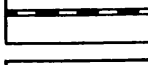
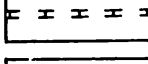
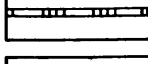
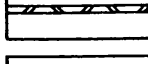
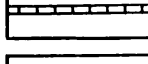
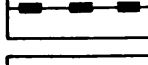



81. Dirt road, forest road (with pass) _____









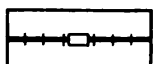
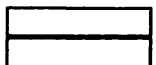



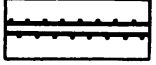
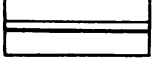
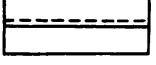
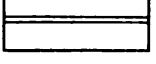
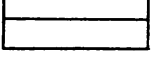
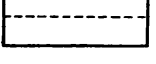
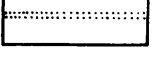
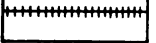
82. Caravan road _____



83. Caravan road _____	
84. Winter road _____	
85. Winter road _____	
86. Fire break _____	
87. Improved corduroy road _____	
88. Improved corduroy road _____	
89. Unimproved corduroy road _____	
90. Unimproved corduroy road _____	
91. Double track railroad with station _____	
92. Single track railroad _____	
93. Electrified railroad _____	
94. Electrified railroad _____	
95. Multiple track railroad _____	
96. Work and branch railroad _____	
97. Narrow gauge railroad _____	
98. Railroad under construction _____	
99. Railroad under construction _____	
100. Dismantled railroad _____	
101. Abandoned railroad _____	
102. Cable railway _____	
103. Suspension railway _____	

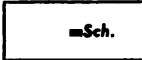
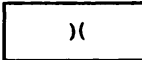

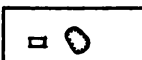
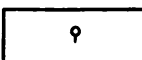
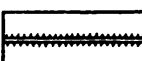
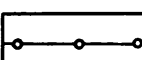
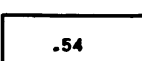


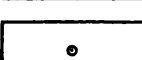
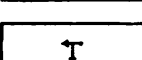
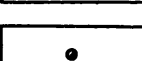


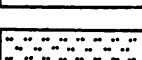
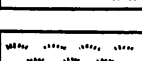


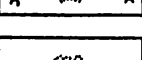
**PART III
SECTION 2**

**SYMBOLS APPEARING ON
GERMAN MAPS OF RUSSIAN AREAS
AT THE SCALE
OF
1:300,000**

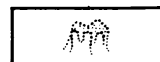
1. Large city, over 100,000 inhabitants _____ **BAKU** 
2. Medium city, 30,000-100,000 inhabitants _____ **Froloff** 
3. Small city, 5,000-30,000 inhabitants _____ **Ssebech** 
4. Market town, under 5,000 inhabitants _____ *Osaritschi* 
5. Large village _____ *Nagorje* 
6. Small village, landmark _____ *Trunewa* 
7. Multiple track railroad with station _____ 
8. Single track railroad _____ 
9. Industrial and local railroad _____ 
10. Narrow gauge railroad _____ 
11. Railroad under construction, abandoned railroad _____ 
12. Highway with good substructure _____ 
13. Highway with poor substructure _____ 
14. Improved country road _____ 
15. Improved country road _____ 
16. Other roads _____ 
17. Footpath, firebreak, clearing _____ 
18. Winter road _____ 
19. Corduroy road _____ 

A solid orange overprint over any classification of road indicates through traffic

20. International boundary _____	
21. S. S. R. boundary _____	
22. A. S. S. R. boundary _____	
23. Territory or province boundary _____	
24. Factory _____	
25. Tractor station _____	
26. Airfield _____	
27. Forest ranger's house _____	
28. Forestry office _____	
29. Wireless station _____	
30. Postal and telegraph station _____	
31. Church _____	
32. Custom's office _____	
33. Lighthouse _____	
34. Beacon _____	
35. Mosque _____	
36. Cemetery _____	
37. Winter hut, camp _____	
38. Nomad camp _____	
39. Ruin _____	

40. Barn, granary _____	
41. Pass _____	
42. Mine _____	
43. Shaft, pit _____	
44. Quarry _____	
45. Dam _____	
46. Oil pipe line _____	
47. Spot elevation in meters _____	
48. Bench mark _____	
49. Triangulation station _____	
50. Astronomical station _____	
51. Meteorological station _____	
52. Hydrographic station _____	
53. Forest with clearing _____	
54. Brushwood, shrub _____	
55. Meadow _____	
56. Moor, marsh, bog, fen _____	
57. Reed _____	
58. Tundra _____	
59. Snow peak _____	

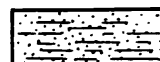
60. Glacier _____



61. Rice field _____



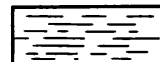
62. Salt swamp _____



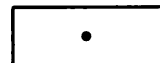
63. Salt pan _____



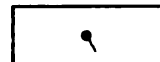
64. Swamp _____



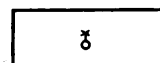
65. Well _____



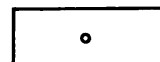
66. Spring _____



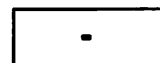
67. Draw well _____



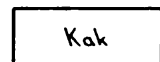
68. Seasonal well _____



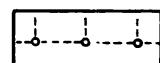
69. Water hole _____



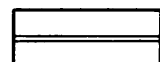
70. Rain gully _____



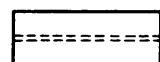
71. Underground aqueduct _____



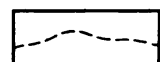
72. Canal _____



73. Intermittent stream (double line) _____



74. Intermittent stream (single line) _____



75. Lake _____



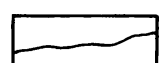
76. Lake, location doubtful _____



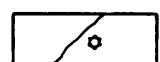
77. Sand bank _____



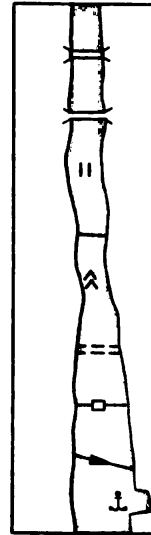
78. Head of navigation _____


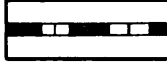
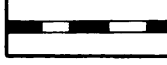
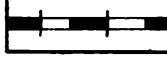
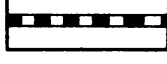
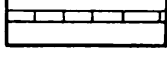
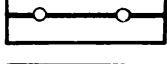
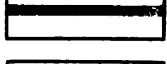
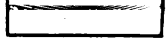


79. Watermill _____



80. Iron bridge _____
81. Wooden bridge _____
82. Rapids _____
83. Falls _____
84. Sluice _____
85. Ford _____
86. Wagon ferry _____
87. Passenger ferry _____
88. Harbor _____



- | | |
|--|--|
| 1. Boundary of U. S. S. R. _____ |  |
| 2. Double track railroad _____ |  |
| 3. Single track railroad _____ |  |
| 4. Single track railroad (section operated electrically) _____ |  |
| 5. Narrow gauge railroad _____ |  |
| 6. Railroad under construction _____ |  |
| 7. Oil pipeline _____ |  |
| 8. First class highway _____ |  |
| 9. Second class highway _____ |  |

Information based on 1:1,500,000 map of Russia in Europe, 1938 edition.

ABBREVIATIONS

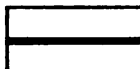
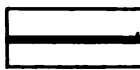
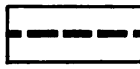
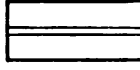
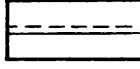
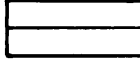
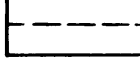
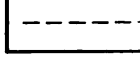
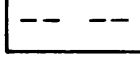

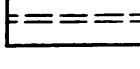
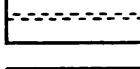
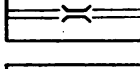
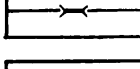
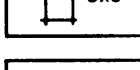
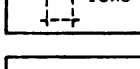
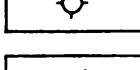
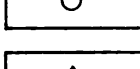

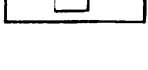
Bar. _____	Baracke _____	Shed, shack, barracks
Bf. _____	Bahnhof _____	Railway station
B. W. _____	Bahnwarter _____	Railway guards house
Br. _____	Brunnen _____	Well
B. _____	Berg _____	Mountain
Bgwk. _____	Bergwerk _____	Mine
Frdh. _____	Friedhof _____	Cemetery
Grbh. _____	Grabhugel _____	Grave, mound
H. _____	Hutte _____	Hut, foundry, works
Hp. _____	Haltepunkt _____	Stop, halt
Hs. _____	Haus _____	House
Hf. _____	Hof _____	Court, farmhouse, farm
Hhl. _____	Hohle _____	Cave
T. O. _____	Teer ofen _____	Tar kiln
M. T. St. _____	Maschinen u.	Motor-tractor station
	Traktorenstation _____	Motor and tractor service base
Qu. _____	Quelle _____	Spring
R. _____	Ruine _____	Ruin, ruins
Sch. _____	Scheune _____	Barn, granary
S. _____	See _____	Lake, sea
S. W. _____	Sagewer _____	Saw mill
Stk. _____	Steinkohlengrube _____	Coal mine
T. _____	Turm _____	Tower
Zgl. _____	Ziegelei _____	Brick-kiln
Swch. _____	Sowchos _____	State farm
Klch. _____	Kolchos _____	Collective farm

PART IV

JAPANESE MAPS

The Japanese Imperial Land Survey has made certain 1:200,000 sheets of far-eastern Russian areas. Apparently these are copied from Russian maps. Many of the Russian symbols have been retained; others have been modified and in some cases changed entirely.

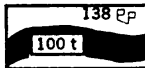
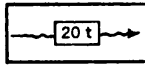
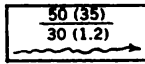
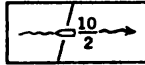

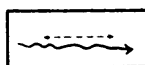

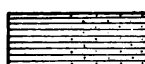
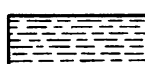
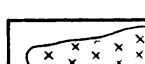




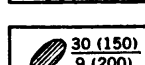
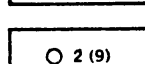
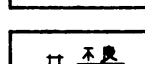
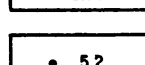

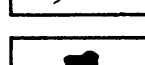
The symbols shown in Part IV include only the Japanese modifications and changes. For interpretation of the original Russian symbols Part I, Section 4 should be consulted.

1. Automobile road, single lane _____	
2. Automobile road, double lane _____	
3. Automobile road, unconstructed but automobile passage possible _____	
4. Field gun road _____	
5. Field gun road, unconstructed but field gun passage possible _____	
6. Transport vehicle road _____	
7. Transport vehicle road, unconstructed but transport passage possible _____	
8. Foot trail, horse road _____	
9. Foot trail, horse road, unconstructed but passage of pack horse possible _____	
10. Wet road _____	
11. Winter road _____	
12. Dirt road _____	
*13. Wooden bridge (character indicates type of load bridge can bear) _____	
*14. Stone bridge (character indicates type of load bridge can bear) _____	
15. Existing airfield _____ (figure indicates size of field in one-hundred meter units)	
16. Proposed airfield site _____ (figure indicates size of field in one-hundred meter units)	
17. Pt. of good observation in all directions _____	
18. Pt. of good observation in all indicated directions _____	
19. Good sighting mark _____	
*20. Rampart (character within symbol indicates type of construction) _____	

*See glossary of characters for interpretation

21. Engine house _____	
22. Coaling place _____	
23. Watering place _____	
24. Mongol nomad village _____	
25. Watchman's or ranger's hut _____	
26. Water tender _____	
27. Warehouse _____	
28. Castle gate _____	
29. Dome-shaped grave _____	
30. Sand and gravel pit _____	
31. Spring _____	
32. Cold mineral spring _____	
* 33. Light forest, passable for artillery _____	
* 34. Light forest, passable for artillery _____	
* 35. Defense forest, passage difficult for foot soldiers _____	
* 36. Dense forest, passable for foot soldiers _____	
37. Mine _____	
38. Steep mountain region _____	
39. Cliff _____	
40. Cleavage _____	

*See glossary of characters for interpretation

41. River navigable for steamer _____ 
42. River navigable for small boat _____ 
43. River markings (numerator = width in meters: in parentheses, width of flow) (denominator = depth in meters: in parentheses, speed of flow) _____ 
44. Ferry (numerator = capacity in persons) (denominator = number of boats) _____ 
- *45. Ford (character indicates types of passability) _____ 
46. Area where fording is possible _____ 
47. Very wet land _____ 
48. Medium wet land _____ 
49. Slightly wet land _____ 
50. Mapped as wet land but dried out _____ 
51. Dry during dry season _____ 
52. Normally wet (except during frozen periods) (numerator = width) (denominator = depth) _____ 
53. Flood limit in rainy and thaw season _____ 
54. Tundra region _____ 
55. Inhabited place (numerator = number of houses: in parentheses, population) (denominator = number of wells: in parentheses, billeting capacity) _____ 
56. Inhabited place (figures indicate number of houses, population) _____ 
- *57. Well (character = quality of water) (denominator = water level: in parentheses, depth of water) _____ 
58. Below land level _____ 
59. Spring _____ 
60. Lake or pond _____ 

*See glossary of characters for interpretation

Wooden bridge	_____	木
Pontoon bridge	_____	舟
Steel bridge	_____	鉄
Stone bridge	_____	石
Concrete bridge	_____	圪
Single foot soldier	_____	人
Pack horse	_____	駄
Transport vehicle	_____	輜
Field gun	_____	砲
Heavy artillery gun	_____	重
Automobile	_____	自
Fresh water	_____	淡
Salt water	_____	鹹
Alkaline water	_____	曹
Filter for drinking	_____	□ 適
Boil for drinking	_____	沸 適
Need repair	_____	徧 要
Meter	_____	米
Difficult	_____	困 難
Bad	_____	不 良
Good	_____	良

