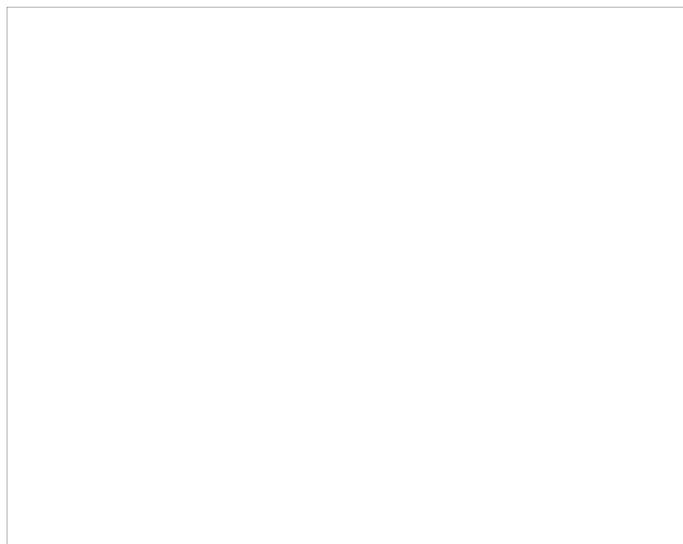


STAT

Official Map Series of the German Laender
(Niedersachsen and Schleswig-Holstein)

Berichte zur Deutschen Landeskunde, Vol X, Nos 1 and 2, 1951;
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STAT

Official Map Series of the German Laender

III

The Official Maps of Schleswig-Holstein

By Hans Ermel of Kiel

(Two charts appended)

Schleswig-Holstein was charted for the first time at the instigation of King Christian III of Denmark by Marcus Jordanus, a professor of mathematics in Copenhagen. He compiled a map of the Holstein and Schleswig dukedoms in 1559. The next mapping of the dukedoms was accomplished upon the order of King Christian IV of Denmark by Johann Meyer, a royal mathematician born in Husum, who travelled through Schleswig and Holstein from 1638 to 1648 in order to survey and map the area. In 1652, 37 general and special maps of the dukedoms were published; of these, almost every map had a different scale (from 1:60,000 to 1:385,000).

The first topographic survey of the Land according to modern standards with triangulation was begun by the Royal Danish Society for Science in Copenhagen in the scale of 1:20,000. The maps on Schleswig were completed and published between 1780 and 1841. The topographic survey of Holstein, planned by land surveyor Schumacher, was only in part completed in a scale of 1:20,000 and was not published except for the trial sheet "Segeberg". Topographic surveys for Holstein and Lauenburg, which were carried out by the Danish and Hanoverian general staff without triangulation, for a long time were the only available material, whereas the Ratsburg region was mapped through the cartographic work of the Earl of Schmottau in 1788. From 1877 to 1879 the Preussische Landesaufnahme (Prussian Topographic Office) conducted a completely new topographic survey of Schleswig-Holstein in the scale of 1:25,000, which even today forms the basis for the present cartographic map-series 1:25,000, 1:100,000, and 1:300,000.

After the compiling of Landeskartenwerke (Land map-series) had been decentralized in 1938 from the Reichsamt fuer Landesaufnahme (Reich Topographic Office) to the newly organized Hauptvermessungsabteilungen (Main Survey Divisions), the Hauptvermessungsabteilung VI in Hamburg was charged, among

other things, with the compilation of the "Deutsche Grundkarte" (German base map) 1:5,000 and the "Topographische Karte" (topographical map) 1:25,000 for Schleswig-Holstein and Mecklenburg. On 1 April 1948 the Hauptvermessungsabteilung VI under the name Hauptvermessungsamt (Main Survey Office) Schleswig-Holstein was taken over as a Schleswig-Holstein Land Office with headquarters in Hamburg. In the charter of 25 May 1948, the duties of the Hauptvermessungsamt were stated as follows:

Compiling and keeping current the "Deutsche Grundkarte" 1:5,000 and

"Katasterplankarte" (Land Registration Maps) 1:5,000 of all Schleswig-Holstein, and

Compiling of "Topographische Karte" 1:25,000, "Karte des Deutschen Reiches" (Map of the German Reich) 1:100,000, "Uebersichtskarte" (General map) 1:300,000, as well as the special maps of the region of Land Schleswig-Holstein and the Hanseatic city of Hamburg.

In April 1950 the Hauptvermessungsamt was transferred from Hamburg to Kiel and received the name "Landesvermessungsamt (Land Survey Office) Schleswig-Holstein".

"Deutsche Grundkarte" 1:5,000 and "Katasterplankarte" 1:5,000

The map series 1:5,000 for all Schleswig-Holstein in 5,246 sheets is almost completed. Of the contoured "Deutsche Grundkarte", only 182 sheets have been published; all other sheets are of the "Katasterplankarte" type. Whereas the sheets of the "Deutsche Grundkarte" are reproduced in flat printing, the reproduction of the "Katasterplankarte" is done by photogravure. The index maps of the 1:5,000 map series are by Kreise (districts) and of 1:100,000 scale.

"Topographische Karte" 1:25,000

"Topographische Karte" 1:25,000 of Schleswig-Holstein, surveyed from 1877 to 1879, consists of a total of 185 sheets, of which 105 sheets are in three color, 80 sheets in one color editions. The original stone engravings

are preserved, but they have not been kept up to date because of the lack of suitable specialists. Chalk prints upon aluminum or new drawings upon chalked blue prints serve as originals now. Before 1948 the correction of the map series was carried out by topographic reconnaissance on 1:25,000 sheets. Now the corrected sheets of the "Deutsche Grundkarte" 1:5,000, after field comparison, are used as the basis for corrections.

"Karte des Deutschen Reiches" 1:100,000

The map series 1:100,000 for Schleswig-Holstein in 26 sheets had to be compiled in makeshift fashion after the loss of the original copper plates. The publishing of single sheets was given up and in their place large sheets (Grossblatt) consisting of four single sheets were reprinted. A correction of the ten large sheets of the Land has not been attempted recently. Since, besides, the topography of "Karte des Deutschen Reiches" 1:100,000 is outdated, the Arbeitsgemeinschaft der Vermessungsverwaltungen der Laender der Bundesrepublik (Working Group of the Laender Survey Administrations of the Federal Republic) recommended the compilation of a new topographic map 1:100,000 in three colors with contour lines. Sheet 56 "Husum" is the first sheet available on Schleswig-Holstein. Sheets 36 (Wyk auf Foehr), 37 (Gredstedt) and 55 (Garding) are almost completed.

"Ubersichtskarte" 1:300,000

The Land Schleswig-Holstein is mapped on four single sheets (L 55 Kiel, M 55 Rostock, L 54 Hamburg and M 54 Schwerin), for which a five color edition with the most recent corrections is available. Schleswig-Holstein map 1:300,000 is formed by combining the four single sheets upon which in addition the Kreis boundaries are stressed by a special orange line. The "Amtliche Entfernungskarte von Schleswig-Holstein" (Official Distance Map of Schleswig-Holstein) to the scale of 1:300,000 in three colors (base - black, water @ blue, streets and kilometer marks - red) with distance tables upon the back were derived from the Schleswig-Holstein map.

"Sonderkarten" (Special Maps)

Besides the official map series, the Landesvermessungsamt Schleswig-Holstein published a whole series of special maps. For each of the 17 Landkreise in the province, there is a one color "Gemeindegrenzkarte" (Community Boundary Map) in the scale of 1:100,000 and 1:200,000. In addition, the community boundaries for all Schleswig-Holstein are represented upon one sheet in the scale of 1:200,000. The "Gemeindegrenzkarten" contain only the administrative boundaries, and no base.

A one color "Uebersichtskarte von Schleswig-Holstein" in the scale of 1:200,000 includes only the inhabited localities and transportation system without contours.

"Amtliche Entfernungskarten" in the scale of 1:60,000 and 1:75,000 have appeared for the Landkreise of Rutin, Norderdithmarschen, Rendsburg, Segeberg, Herzogtum Lauenburg, Oldenburg/Holstein, Eckernfoerde, Steinburg, Ploen, Flensburg, Husum, Stormarn, Pinneberg, and for the Luebeck Stadtkreis (city district).

Multi-colored "Stadtplaene" (city maps) have been published for Luebeck in scale of 1:15,000; Neumuenster in scale of 1:15,000; Travemuende in scale of 1:12,500; Eckernfoerde in scale of 1:10,000; Bad Segeberg in scale of 1:5,000; Itzehoe in scale of 1:5,000; Rutin in scale of 1:5,000; Wyk auf Foehr in scale of 1:5,000.

Further special maps of the Landesvermessungsamt represent:

Insel Foehr	1:25,000	in four colors
Umgebung von Hamburg	1:50,000	in eight colors
" " "	1:300,000	in five colors
Umgebung von Kiel	1:300,000	in five colors

Official Maps of the German Provinces

IV

The Official Topographic Maps for Lower Saxony
Historic Retrospect and Present Situation

By W. Kost of Hannover

Two charts appended

The Most Important Older Maps of Lower Saxony

The older maps of Lower Saxony were not based upon an unobjectionable and adequate method of survey. They were more pictures than maps and were composed in varying colors and designs. They did inform somewhat about the region represented.

For the Fuerstentum Lueneburg there is an atlas which Dr. Mellinger, the court doctor in Celle, gave to Duke Ernst August of Lueneburg in 1600. It contains maps of the whole Fuerstentum Lueneburg, the Hoya Aemter of Nienburg, Hoya, and Bruchhausen, as well as Grafschaft Diepholz. The maps are based upon a compass survey in which the distances were estimated.

An older map series is based on a geodetic survey of Herzogtum Braunschweig-Wolfenbuettel before its union with the Fuerstentum Calenberg in 1585. This map series shows the Hildesheim Aemter which were given to Wolfenbuettel as a result of the Quedlinburg Treaty of 1523. The individual maps are oriented to the south and call to mind Merian's maps in their very crude presentation. Upon them, forests are shown with great detail; mountains, on the other hand, are almost completely ignored. When nineteen more Hildesheim Aemter were incorporated into the Herzogtum Braunschweig-Wolfenbuettel in 1643, they were shown in a later map series which, compared to the earlier one, shows a northern orientation.

The engineer, Couffiers de Bonnavet, called de Villiers, undertook the first geodetic survey of Kurfuerstentum Hannover from 1698 to 1732 by riding through Calenberg - Goettingen - Grubenhagen - Hohenstein - Hoya - Diepholz. He was commissioned to survey the whole area by Aemter in the scale of 1:12,500; in his maps he was to restrict himself to an exact presentation only of the boundaries of these Aemter, and only superficially to present everything that lay within the district of any one Amt. Villiers' maps distinguish themselves through an artistic representation of the province; the majority of them have been preserved.

The project of constructing a connecting canal between the Weser and Elbe Rivers through the large moor in the Stade and Bremen region was the basis for the first topographic survey of the Kurfuerstentum Hannover according to modern standards, with plane table triangulation. The local survey was in the hands of the Royal Engineer Corps of the Kurfuerstentum - a small, special group composed of capable topographers, whose commander at the time was General Georg Josua du Plat. Among his officers, Johann Ludwig Hogrowe deserves special mention; his report "Practical Guide for the Topographic Survey of an Entire Province", which appeared in 1773, gives us valuable insights into the method of survey of that time.

King George III ordered the topographic survey of the whole province in 1767. From this survey, province maps in smaller scale were derived later.

The Topographische Grundkarte was drawn to the scale of 1:21,333 $\frac{1}{3}$. A total of 165 single sheets were drawn with the greatest care and in different colors according to a uniform scheme. The well considered choice of symbols and colors, as well as the simple and yet clear emphasis of many natural phenomena give this map series a lasting historic value. The following is to be mentioned about the contents of the maps:

Short cast shadows (in whose drawing the Engineer officers obviously were especially talented) not only served to emphasize public buildings and other physical features, but also give it the appearance of a relief map. We find parallel lines drawn to designate the furrows in the field; these are probably not merely to be considered as a symbol, but are supposed to give information on the direction of the plowing in a given locality.

In forest areas, besides distinguishing between deciduous and coniferous forests, the age of the stock of trees is also indicated.

In the presentation of the meadows and marshes with a light green basic color and broken lines and dots, the good meadow-land is indicated by a gray-black color and the marshes by gray-green. The residential sections of the cities and villages, which are in red or pink, as well as individual houses, are marked with the number of existing fireplaces. Astonishing and often admirable is the presentation of the terrain, which was shown without contours, but it still is essentially correct. Lesser elevations are indicated through shading, and greater elevations through shading and hatching, whereby the steep inclines are made darker. However, the small rises in the flatlands are exaggerated in most cases, whereas the surface appearance of the mountains, like the sharp Jura chain of the Ith or the variegated sandstone surfaces of the Solling or the mountain areas of the high Harz are splendidly reproduced.

Distinction is drawn between highways, post streets and foot-paths; even the rows of trees along the larger streets are noted.

The fact that the first highways, which were constructed under the direction of Heinrich du Plat, a brother of the general Georg Josua du Plat, during the topographic survey are already included on the southern sheets shows that street construction in the Kurfuerstentum Hannover is not to be attributed to the initiative of Emperor Napoleon.

The larger cities and fortresses were presented throughout the topographic survey in the scale of 1:2,000; maps of the environs of several cities are also drawn in the scale of 1:10,600. From the Topographische Grundkarte of scale 1:21,333 1/3 two more map series were derived; a military map and a general map.

"Militaerkarte" 1:64,000 was drawn by provinces with great care and exactness and consists of 35 sheets. The "Militaerische Topographische Karte des Bistums Hildesheim" in the scale of 1:64,000, which was published in 1798 after the completion of the entire map series (1787), is also worthy of mention and owes its existence to General David Scharnhorst. Its presentation is not as good as the other maps, since for military reasons it had to be completed quickly.

The drawing on Generalkarte 1:192,000 does not attain the exactness which the other two map series evidence. However, on the other hand, it does show longitudes and latitudes, which were subsequently added. The map series consists of four sheets.

The "Historical Commission for Hannover, Oldenburg, Braunschweig, Schaumburg-Lippe, and Bremen" had copies made of the hand-drawn maps, of which, for the most part, only one copy is preserved; in the most favorable cases there are several. Of the Topographische Grundkarte 1:21,333 1/3 there is a photogravure edition in the scale of 1:40,000 with 159 sheets and of the Militaerkarte des Bistums Hildesheim 1:64,000 a photogravure edition in the original scale.

Until the middle of the 18th century, the production of maps was not yet under the jurisdiction of the state in Oldenburg either. Maps of larger areas all look like sketches of the terrain; Hunrich's map of the Grafschaften Oldenburg and Delmenhorst in the scale of 1:165,000 which was published in 1761, for the first time shows highways besides showing the Aemter and Vogtei boundaries.

Landvogt Georg Christian von Oeder from the Danish government instituted the first topographic survey in Oldenburg. The result of this survey was compiled in special maps of scale 1:4,000, and the reductions of this map to the

scale of 1:20,000 resulted in the Vogtei Karten. In three sheets these include the region of the former Grafschaften Oldenburg and Delmenhorst. They were the basis for the maps published by Christian Friedrich Mentz in the scale of 1:160,000 which is entitled: "Karte vom Herzogtum Oldenburg. According to trigonometrical and topographical surveys and the most recent astronomical determinations. Northern part with the bordering Herrschaften Jever and Kniphausen and the mouths of the Weser and Jade Rivers - 1803". This map was engraved in copper in 1804 by Tischbein. Since the seventies of the previous century, reductions of the cadastral field maps to the scale of 1:10,000 were printed as community maps.

In the lot survey carried out from 1835 to 1850 by Albert Philibert von Schrenck, the organizer of Oldenburg surveying and a pupil of C.F. Gauss, a topographic index sheet was always added to the original hand drawings which were arranged by fields. The Generalkarte vom Herzogtum Oldenburg of scale 1:200,000 originates from these chart sheets; it was engraved in copper and for the first time was accessible to the public in 1856.

Between 1853 and 1856, a Spezialkarte vom Herzogtum Oldenburg of scale 1:50,000 in 14 sheets was engraved in stone. The map was in great demand, since the carefully prepared symbols for deciduous and coniferous forests, heaths, moors, fields, alternating woods, meadows, swamps, and gravel, as well as the presentation of scattered cultivation, the dikes and alluvial pasture land on the coast, and the sandbanks and shallows in the ocean gave an excellent picture of the characteristics of the Oldenburg landscape. Also the few rises in terrain are characteristically reproduced, but unfortunately remained without indication of elevations. All types of roads are indicated through double lines.

The maps came out in several editions, but have not been published since 1914; they were replaced by nine Entfernungskarten (distance maps) in four colors in the scale of 1:50,000. Since 1928 the Oldenburg Survey Office has also published ^a Verwaltungskarte (administration map) in eight colors of scale 1:100,000.

Near the turn of the century, the Topographische Landeskarte des Herzogtums Braunschweig to the scale of 1:10,000 was begun through the activity of Professor Dr. C. Koppe in Braunschweig after detailed research and test surveys. It was to the same scale as the Braunschweig forest area maps.

Plane table and alidade served for the survey, in addition to the use of Feldbereinigungsplaene 1:3,000 and new Forstkarten (forest maps) 1:5,000 which originated in 1880. The map is in three colors (base - black, terrain - brown contour lines, water - blue) and was engraved in copper. The symbols correspond to a large part to the sample sheet for plane table sheets; the roads are stressed through a brown surface shade. Throughout there are square sheet edges, however many sheets depart from the format as a result of the irregular boundary lines of the ^{Land} Braunschweig Province. At the edges of the sheets, the geographical grid is divided according to longitudes and latitudes at 5 second intervals and according to perpendicular coordinates of 100 to 100 meters. 5 meter contour lines are drawn in everywhere on the map, also in the steep mountain areas. In the flat terrain, 2.5 meter and 1.25 meter intermediate contours were inserted according to need in order to reproduce terrain forms and especially the transitions from one form to the other. All intermediate contours are kept so light, compared to the 5 meter contour lines, that the uniform picture of the terrain presented by the latter is in no way harmed by these intermediate contours.

Since 1906 the contour lines from more recent plane table sheets of scale 1:25,000 were used with additional determination of local elevations and terrain inspection by topographers.

Of the total area of the Herzogtum Braunschweig (3,672 square kilometers, of which 836 square kilometers are forest) only about 700 square kilometers were surveyed on 26 sheets.

Koppe gave the following formula for the limit error of contour lines:

$$Mh = \frac{1}{\sqrt{2}} (1.0 + 10 \text{ tg } a) m$$

His research has become basic for topography.

Present Condition of Official Cartography

From 1878 to 1908 the Prussian geodetic survey conducted a completely new topographic survey of the entire present region of Lower Saxony to the scale of 1:25,000; today it still represents the basis for the 1:25,000, 1:100,000 and 1:300,000 series.

Since then the geodetic survey has undergone many organizational changes. Until 1938 the Reichsamt fuer Landesaufnahme (Reich Office for Geodetic Survey) in Berlin was responsible for the compilation of all official topographic maps of Lower Saxony. Then the compilation of map series of the Laender was decentralized to the Hauptvermessungsabteilungen (Main Survey Divisions). Hauptvermessungsabteilung VII in Hannover was commissioned to keep current, reproduce, and print German base maps of scale 1:5,000 and topographic maps of scale 1:25,000. After the collapse, the Niedersaechsisches Landesvermessungsamt (the Geodetic Survey of Lower Saxony) developed from Hauptvermessungsabteilung VII. The Minister of the Interior of Lower Saxony described the activity of this agency in the decree of 27 November 1948 as follows:

The
1./Niedersaechsisches Landesvermessungsamt has the task of compiling, keeping

current, reproducing and printing the

- a) Reich maps (Deutsche Karte 1:50,000; Karte des Deutschen Reiches 1:100,000; Uebersichtskarte von Mittel-Europa 1:300,000; Uebersichtskarte 1:1,000,000),
- b) Land Map series (Topographische Karten 1:25,000; Deutsche Grundkarten 1:5,000),
- c) Special official maps.

2. direction and supervision over the following geodetic survey tasks which were delegated to the cadastral offices:

- a) cooperation in the continuance of topographic maps 1:25,000
- b) compilation of Katasterplankarten (cadastral planning maps) 1:5,000 as a preliminary step for Deutsche Grundkarten (base maps) 1:5,000.

1. "Katasterplankarten" (Land Registration Maps) and "Deutsche Grundkarten"
(German Base Maps) in the scale of 1:5,000 1)

The Deutsche Grundkarte 1:5,000 today is the most important planning and economic map. At present it is no longer surveyed completely independently, neither topographically nor photogrammetrically, but is developed in Lower Saxony from the Katasterplankarte 1:5,000. If in its final form the latter conforms to the specifications for the Deutsche Grundkarte as to arrangement, content and format, it becomes the base plate for the Deutsche Grundkarte 1:5,000. After the contour survey and the drawing of the contour plate, the final step in the compilation of the Deutsche Grundkarte has been reached.

Lettering is stamped on the map with the Wulkow punch apparatus. In this way the uniformity of lettering is kept when the maps are printed in one atlas. It was not possible to produce the maps from new surveys in Lower Saxony for financial reasons. Therefore, they are based extensively upon the use of cadastral data, in conjunction with control point determinations and local field comparison or supplementary surveys. The reproduction of Katasterplankarten is done by heliogravure (one color); only in special cases are the maps printed. The Deutsche Grundkarte 1:5,000, on the other hand, always appears in print as a two-colored map with the base in black and brown contour lines. Deutsche Grundkarten of the area of greater Hannover are an exception. Their base is sepia brown and the contour lines gray-green.

2. "Topographische Karten" (Topographic Maps) 1:25,000 (plane table sheets)

Before publication of the Deutsche Grundkarte 1:5,000 and the Katasterplankarte respectively, the Topographische Karten 1:25,000 (plane table sheets)

1) Since the article series "The Official Map Series of the German Laender" in "Berichte zur Deutschen Landeskunde" already includes facts about projection, sheet format and numbering of the official topographic maps, this has not been repeated here.

were the only maps which formed the basis for all other scales since they were original surveys by topographers in the field.

Surveyed with plane table and alidade, the originals were engraved in stone according to the classic process. The original engraved stones are still preserved, but are, however, not kept current in that way because of the lack of suitable experts. Chalk prints drawn upon aluminum ~~to~~ to scale or new drawings upon chalked blue prints now serve to keep the map series current.

The Topographische Karte 1:25,000 is corrected through local field comparison of the existent maps with nature in all places where the Deutsche Grundkarte 1:5,000 or the Katasterplankarte do not yet exist.

However, in areas for which the ~~German ground map~~ ^{Deutsche Grundkarte} or Katasterplankarte already has been compiled, these are used to correct the Topographische Karte 1:25,000. This takes place through a so-called topographic reporting service through which the cadastral offices, as the appointed topographic reporting offices, indicate to the Niedersaechsisches Landesvermessungsamt all topographic changes at regular intervals upon so-called report sheets.

New originals are compiled for sheets which are geodetically inexact or for such sheets for which the corrections would be of such an extent that they would correspond to a new survey of the sheet. These are compiled in three colors (base - black, terrain - brown contour lines, water - blue).

In Lower Saxony the number of three-colored plane table sheets is still very small. The following sheets have been completed in three colors:

2213 Wangerooze	3524 Isernhagen
2306 Borkum	3529 Cifhorn
2307 Juist-West	3530 Fallersleben
2308 Juist-Ost	3623 Gehrden
2719 Worpswede	3624 Hannover
2728 Lueneburg	3628 Wendeburg
3320 Liebenau	3629 Meine
3507 Neuenhaus	3728 Vechede
3508 Nordhorn	3729 Braunschweig
3523 Stoecken	4426 Weake

As on the Deutsche Grundkarte 1:5,000, the lettering is stamped upon the map with the Wulkow punch apparatus. In reproduction, the positive copy is used, which in turn is produced from an "astralon" [a type of plastic glass].

The Niedersaechsisches Landesvermessungsamt has compiled 432 maps to the scale of 1:25,000. The present status as to correction of individual sheets is seen from appendix 2.

3. "Topographische Karte" (Topographic Maps) 1:100,000

The individual sheets of this map series are compiled in the classic method of copper plate engraving. Since the original copper plates were lost after the last war, the individual sheets were not continued. In order, however, to be able to satisfy the great demand for these maps, large sheets composed from four single sheets were reprinted. The production of these printing plates was possible because seconds of the originals of the large sheets were preserved on film, "ultraphan", or "astralon". However the condition of these bases is not very good; in many cases, the engraving plates produced from them, therefore, are not satisfactory. Even though it is exceedingly demanding work, the Niedersaechsisches Landesvermessungsamt, in order to correct these drawings, has supplemented all the sheets under its jurisdiction with recent information.

Since the map representation of the 1:100,000 sheets does not fit present demands anymore and the old originals have been lost, it is necessary to provide new originals for the individual sheets. This project is a supra-regional problem, and so the Arbeitsgemeinschaft der Vermessungsverwaltungen der Laender der Bundesrepublik Deutschland (Working Group of the Laender Survey Administration of the German Federal Republic) reached the following decisions at the convention in Bad Godesberg on 1 August 1950 on the basis of experimental sheets which were compiled by several Landesvermessungsamter:

1. The new compilation of topographic map 1:100,000 is a recognized need and should be undertaken by all Laender of the Federal Republic according to an uniform sample sheet.

2. To keep the uniformity of the topographic maps, the new sample sheet will be developed upon the basis of previous sample sheets 1:25,000 and 1:100,000. In detail, the following is foreseen:

- a) The chart will be produced in transversal, conformal cylinder presentation according to Gauss-Krueger. The previous sheet format and the previous numbering of map 1:100,000 will be retained. The new map is to keep the designation "Topographische Karte 1:100,000"
- b) The map series is to be in three colors (base - black, water - blue, terrain - brown contour lines). Further coloring (shading, forest, etc.) will be decided upon at the given time.
- c) Symbols will be selected in accordance with the Bavarian proposal. For the choice of type, a proposal will be submitted after the conclusion of further experiments.

The Niedersaechsisches Landesvermessungsamt has compiled sheet 286 Hannover as an experimental sheet; preliminary work for three further sheets is in progress.

4. "Gemeindegrenzenkarten" (Community Boundary Maps) 1:200,000

The Niedersaechsisches Landesvermessungsamt, on the basis of the old edition of Topographische Uebersichtskarte 1:200,000, has published Gemeindegrenzenkarten of the same scale. The series consists of 12 normal sheets and six combined prints, whereby the sheet arrangement of the Topographische Karte 1:25,000 is shown by a red overprint.

In addition, sheet 86 "Hannover" contains important district centers as well as the main rivers and main railroad lines in blue-gray for better orientation. At a later time, all Gemeindegrenzenkarten are to be compiled and printed in this way.

5. "Uebersichtskarten" (General Maps) 1:300,000

The Uebersichtskarten von Mittel-Europa 1:300,000 have been developed from the scale 1:100,000 and have been produced in the classic process of stone engraving. Today these valuable lithographic stones for the most part are not available anymore. Reprinting from the existent transparencies (film or "astralon") is planned.

Since most of the sheets of this map series extend into the area of neighboring Laender, an agreement about the compilation of the individual sheets was reached with the respective Landesvermessungsaeemter. The Nieder-saechsisches Landesvermessungsamt is compiling the following sheets:

K. 54 Oldenburg
K. 53 Osnabrueck
L. 53 Hannover
M. 53 Magdeburg
M. 52 Halle

All sheets now exist in a one color and a five color edition with the most recent corrections.

6. "Sonderkarten" (Special Maps)

The official maps are reworked into numerous special maps. On 1 April 1951 the following special maps with the most recent corrections existed:

a) Environment maps

Hannover 1:25,000 - two colors
Watenstedt-Salzgitter 1:25,000 - one color
Langelsheim-Goslar-Harzburg-Vinenburg 1:25,000 - one color
Kleine Umgebungskarte von Hannover 1:100,000 - one and five colors
Grosse Umgebungskarte von Hannover 1:100,000 - two and seven colors
Umgebungskarte von Braunschweig und Wolfenbuettel 1:100,000 -
three and five colors

b) Kreiskarten (district maps) with Kreis boundary lines in color 1:100,000

Hannover	Goslar
Hildesheim	Gandersheim (five colors)
Marienburg	Oldenburg mit Stadtkreis Delmenhorst und Peine

Other Kreis maps are in progress

c) Hiking maps

Der Deister mit Wanderwegen 1:25,000 (one and seven colors)
 Der Nordwestharz mit Skiwegen 1:30,000 (five colors)
 Westharz mit Wanderwegen in 1:100,000 (six colors)
 Die Lueneburger Heide 1:100,000 (seven colors) in four sheets and
 and a central sheet (Umgebung Soltau)

d) Lower Saxon maps in 1:300,000

General maps of Lower Saxony with Kreis boundary lines
 (two, four and seven colors)
 Road maps of Lower Saxony with Kreis boundary lines and official
 kilometer figures
 General maps of the administration boundaries with multi-colored
 overprint of the Kreise

e) City and island maps

The following city and island maps have been published by the
 Vermessungs- und Katasterverwaltung Niedersachsens (Survey and
 cadastral administration of Lower Saxony):

Stadtplan Nienburg/Weser	1:5,000	1 color	1949
Norden	1:7,500	"	1949
Helmstedt	1:5,000	"	1949
Leer	1:7,500	"	1949
Bremervoerde	1:5,000	"	1950
Bad Gandersheim	1:5,000	7 colors	1950
Lueneburg	1:10,000	1 color	1950
Inselplan Langeoog	1:4,000/1:25,000	5 colors	1950
Juist	1:5,000/1:25,000	"	1951
Spiekeroog	1:5,000/1:25,000	"	1951

Bibliography

1. J. Kretschmar: Der Plan eines historischen Atlases der Provinz Hannover (The plan of a historic atlas of Hannover province). In: Zeitschrift des Historischen Vereins fuer Niedersachsen. 1904, Vol. 1, page 402.
2. H. Wagner: Begleitworte zur topographischen Landesaufnahme des Kurfuerstentums Hannover von 1764-1786 (Notes on the topographic survey of the Kurfuerstentum Hannover from 1764-1786) - Historische Kommission fuer Hannover, Oldenburg, Braunschweig, Schaumburg-Lippe und Bremen.
3. G. Schnath: Die Kurhannoversche Landesaufnahme 1764-1786 (The Survey of the Kurfuerstentum Hannover). In: Hannoversche Magazine. Vol. 7, page 33-53.
4. Raths: Das Vermessungswesen in Oldenburg. (Surveying in Oldenburg). In: Zeitschrift fuer Vermessungswesen. 1937, page 385-396.
5. W. Kost: Die amtlichen Kartenwerke in Niedersachsen (The official map series in Lower Saxony). In: Neues Archiv fuer Niedersachsen. No. 11, 1949, page 332-338.