

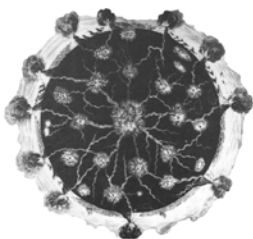
R. LEE HADDEN

THE HERINGEN COLLECTION OF THE US GEOLOGICAL SURVEY LIBRARY, RESTON, VIRGINIA

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ABSTRACT



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A special collection of German, Polish, and Russian language books, maps and reports in the US Geological Survey Library has an interesting and unusual history. The so-called ‘Heringen Collection’ came from Nazi Germany. Many of these items were captured from libraries, offices and even private homes as the German Army advanced into neighboring countries. In the last days of the war, these maps, reports, photos and other records were sent from the Military Geology offices in Berlin to the safety of a deep potash mineshaft in Heringen (Werra), in Hessen, Germany. A group of US Army soldiers found these lost records of the Third Reich. When removed from the Heringen mine, those records that dealt with the earth sciences, terrain analysis, military geology and other geological matters were sent to the USGS, and eventually came to reside at the USGS Library. The printed papers and books were mostly incorporated into the main collection, but a portion of the materials have never been cataloged, calendared or indexed. These materials have many current uses, including projects of value to citizens in their nations of origin.

1. INTRODUCTION

The Heringen Collection at the US Geological Survey is a special collection of maps, books and reports stolen by units of the German *Wehrmacht* (armed forces) as they invaded and occupied countries during World War II. The materials in the Collection came from private, society and public library collections, and were used by military geologists in each German army to help protect its soldiers, to advance their invasion, and to consolidate their occupation. They used the maps of the occupied countries against their peoples. For a generation after the invasion of the Soviet Union, this influenced the way Russian maps were drawn and printed.

2. FALSIFIED INFORMATION

As a consequence of this, since World War II, scientific maps in Russia often have been published with deliberately incorrect information. Because of their experience with the Germans in World War II, the Russians knew that their own maps, if captured by an enemy, could be used against them. Disinformation in scientific cartography thus became a policy of the Soviet Government. Thus according to Pear (1988): “The Soviet Union’s chief Cartographer acknowledged today, in the government newspaper *Izvestia*, that the Soviet Union had deliberately falsified virtually all public maps of the country for the last fifty years. He said the lifting of state security directives . . . would allow the drawing of accurate maps” (Pear 1988, p. 4).

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Mark Monmonier has also written about the Russians' practice of placing deliberate disinformation on their printed maps: "Soviet cartographic disinformation affected all maps of urban areas. Detailed street maps of Moscow and other Soviet cities often failed to identify principal thoroughfares and usually omitted a scale, so that distances were difficult to estimate. Although local citizens were well aware of its presence, Soviet street maps of Moscow suppressed the imposing KGB building on Dzerzhinski Square, as well as other important buildings" (Monmonier 1996, p. 117).

This problem of falsified Russian maps was also mentioned in an article by the British financial journal, *The Economist*. Until the early 1990s, official Soviet maps were regularly and randomly falsified. Many maps were printed without latitude or longitude, and often they lacked a properly defined scale. Sensitive military bases were sometimes moved around on their maps, or left out altogether. For example, Nevel, a strategic railway junction in northwestern Russia, was shifted by several miles in each successive edition of the official Soviet Government's map of the region. In spite of this secrecy and paranoia, Western cartographers had accurate maps of the former Soviet Union from at least 1945, when the Allies captured Russian pre-war maps from the Germans near the end of World War II (Anon. 1992, p. 83).

Not all captured maps, however, were accurate or could be trusted. Sometimes the maps had been drawn incompetently, and sometimes information was deliberately false. There are a number of cases where captured maps led to problems for the Allies. In one case, the British Royal Air Force (RAF), used captured Italian maps to try to bomb an aircraft factory in Austria. This was a follow-up raid flown at night, after the Americans had previously bombed an ammunition plant during daylight. Either the American bombers were able to correct, by sight, the misleading information on their maps or the US Air Force used different maps from the British forces. Wellington bombers from 104 Squadron RAF based at Foggia in Italy made a night raid on the Messerschmitt factory at Steyr in Austria on 24 and 25 February 1944. Of the thirty-six Wellingtons that took off from Foggia, only two found the target. Other bombers, using captured Italian maps that were later found to be erroneous, were unable to navigate accurately through the mountains and six aircraft were lost in the Alps by flying into mountains where their captured maps indicated lesser heights.¹ In one account, an artist described the story to accompany a painting.

As another example of captured maps gone wrong, in 1944 twenty-five German POWs pulled off the largest and most spectacular escape from an American prison compound during the war by digging a 178-foot tunnel out of the US Navy's Papago Park Prisoner of War Camp in Arizona. All of the escaped soldiers eventually were captured, but some remained at large for more than a month. Among the last to be brought in were three soldiers who had based their audacious but ill-fated escape plans on a stolen highway map of Arizona, which showed the Gila River flowing into the Colorado River, which in turn led to Mexico. Devising a scheme to flee by water, they constructed a collapsible kayak under the noses of their captors, tested it in a makeshift pool within the prison compound, and then carried the boat out through their tunnel. Their plan was perfect—except for their stolen map. The Gila River, shown on the map as a healthy blue waterway, turned out to be little more than a dry rut with intermittent shallow pools of water (Harvey 2000, p. 154).

1 Steve Gibbs, "Encore". See: <http://www.cranstonfinearts.co.uk/dhm2543.htm>.

3. GEOLOGIC MAPS: COLLECTING AND DESTROYING DATA USE

Most of the maps drawn before the War, however, were considered sufficiently accurate. Especially prized were the geological maps. For several years before the War these were collected by the German Government—by special arrangements, scientific exchanges and purchases through map vendors. And during the War, geological texts, reports, and maps compiled before the hostilities began were collected by the German army staff.

The Heringen Collection came about as a result of three different policies on the part of the German Army. The first policy of looting occupied libraries was a product of the Nazi's concept of total war, which provided that enemies should be treated ruthlessly and that all their resources, both material and intellectual, would be used against them. Thus, libraries were to be looted for any financial or technical information of value, and any collections of little interest to the Third Reich were to be destroyed.

The second policy leading to the destruction of civilian libraries in wartime was a product of the Nazi Party's racist theories. Peoples considered to be inferior to the Aryan race were to be deprived of their libraries and all cultural and educational materials. Thus, deliberate policies of reducing library access to subject peoples, such as the Poles, were instigated. Non-Germanic historical or cultural collections were to be systematically destroyed.

The third policy came under the control of the armies and the military geologists, known as the *Wehrgeologenstellen* (Military Geology Units) (see Figure 1). Anything of use to these military geologists was to be captured and used by the advancing armies. For this forced acquisition, they would use military, civilian and slave labor to acquire, handle, and transport the documents. The Military Geology Units of World War II had developed from the smaller military geology support units of World War I.

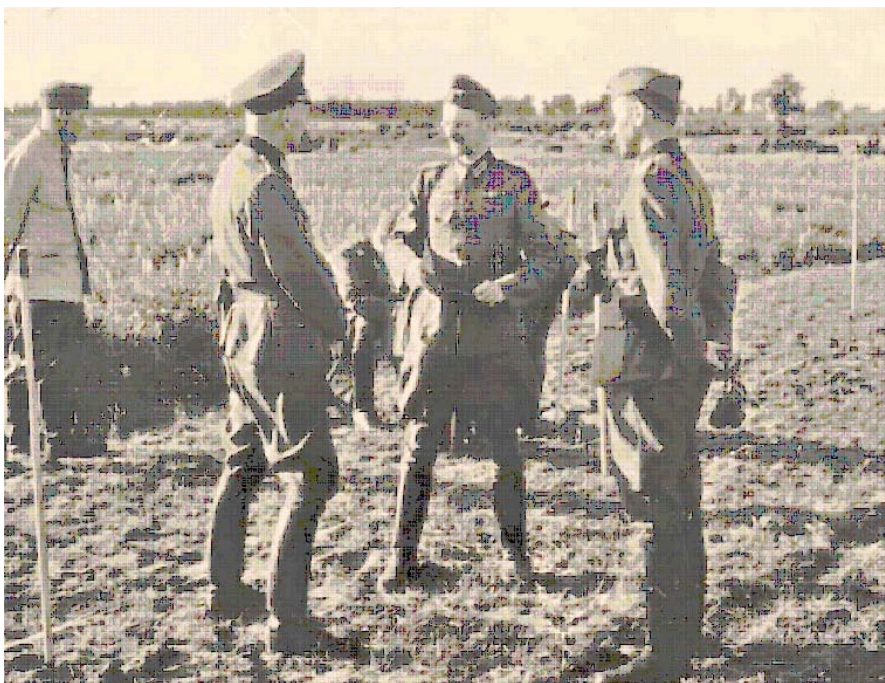


Figure 1. Photograph of the *Wehrgeologenstellen*, Unit #26, in Poland. USGS Library, Historian's Office.

One of the lessons learned by the German Army from World War I was the need for better geological advice and information for the general staff. In the 1914–1918 conflict, solid-earth entrenchments and breastworks dug during August became quagmires of mud by December. Water supplies were either contaminated or overused. Basic engineering for roads and transportation for the army, and topological and terrain studies, were lacking. Immediately after the end of World War I, the German Army instituted a massive study of the lessons to be learned from the conflict and planned to develop new operational doctrine for the army and the air force (Corum 1994, p. 18). Included in these studies were the roles of geologists and earth scientists to assist the military. So “[d]uring World War I, the Germans had 250 geologists working under the director of the Military Survey, or Vermessungabteilungen, in 29 different units. In 1918 these military geologists were transferred to the Engineer command” (Rose and Willig 2004, pp. 13–14).

During the reorganization of the German army during the 1930s, the *Wehrgeologenstellen* (Military Geology Units) were incorporated into the army staff, which eventually had more than 400 geologists. While many of these men in civilian life were employed by the national or state geological surveys, employees of mining firms or corporation, or were academics before the war, with the outbreak of hostilities they became, voluntarily or involuntarily, soldiers in the army.

The work these geologists did for the army headquarters staff was both strategic and tactical. In the main offices in Wannsee, a suburb of Berlin, they helped the general staff with planning the invasion and occupation of other countries. They gave advice and consulting support to the generals of each army. A report from 1946 concerning the German Military Geology unit stated that:

Captured intelligence documents clearly reveal that German geologists played a major role in the assembling of terrain and engineering intelligence for all levels of German planning. These intelligence reports provide comprehensive and explicit coverage of the effects of topography and ground condition upon military operations. In addition to having geologist[s] in staff positions at various levels the Germans organized geological units whose duties were to investigate special geological problems, to provide field consulting service, and to furnish the Staff with complete geological information. Some of these units even conducted geological surveys in areas where published data were inadequate for planning purposes (Hunt 1946, p. 100).

4. INTELLECTUAL ISOLATION

At the same time that the Germans were planning to invade their neighbors, the academic libraries in Germany were suffering from intellectual isolation. Academic libraries in Germany were placed under official censorship, especially in the subscriptions to foreign publications. Even in the neutral pure sciences, permission had to be obtained from the Gestapo to allow the purchase of foreign science journals. The British journal, *Nature*, for example, was forbidden due to its contemptuous remarks about German science” (Richards 1985, pp. 159, 170) (see Figure 2).



Figure 2.
Stamp of the Geography Institute,
University of Köln. USGS Library.

Samuel Abraham Goudsmit was a member of the US War Department Technical Mission to Germany after the war. He wrote about how this problem of isolation was repeated over and over in discussing German science under the Third Reich. The loss of interchanges of scientific information, and the consultation with other scientists, frequently hobbled German scientific achievements. The Nazi machine, so efficient in some ways, never seemed to learn how to make the most of the scientific talent it had. The anti-Semitic programs, which had been crippling German research (and nourishing that of the Allies) since 1933 was an even stronger factor. But there was something else—something that stifled even the best of the research minds left to work on war problems. This ‘something else’, was the isolation of German science. In the vacuum deliberately created by the Nazis, German scientists gradually lost touch with what the rest of the scientific world was thinking and doing. Lacking checks and balances in their own work, they compounded their errors and missed the openings through which they might have otherwise have achieved success (Goudsmit 1946, pp. 2176 and 2263).

As soon as the German Army began to advance outside its country’s borders, however, this isolation changed as current scientific information from the occupied countries came under German control. Although still isolated, as Nazi areas of control increased, they were able to access scientific information held by the less-isolated libraries in the occupied countries (see Figure 3).



Figure 3.
Library stamp for a map taken from a French
geological society. USGS Library.

The acquisition of geological and hydrological data by the advancing armies was handled by several different military units. The geologists probably worked as guides and advisors, determining which materials should be seized and which could be ignored. The

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military provided armed men to back up their decisions, and to intimidate and overwhelm library staffs.

In Western Europe, with the advancing German troops, were elements of the ‘von Ribbentrop Battalion’. These men were responsible for entering private and institutional libraries in the occupied countries and removing any materials of interest to the Germans, especially items of scientific, technical or other informational value.

On the evening of 5 August 1941 . . . von Kunsberg informed us of Reich Minister of Foreign Affairs, Joachim von Ribbentrop’s² verbal order according to which all scientific institutions, libraries, palaces, et cetera, in Russia were to be thoroughly ‘combed out’ and everything of definite value was to be carried off.

The von Ribbentrop command responsibilities were later taken over by the *Einsatzstab Reichleiter Rosenberg*, also known as the ERR (Posté 1964, pp. 244–245).

Personal as well as public libraries were looted. As the German armies advanced into Holland and France, so many personal collections were looted that civilian sub-contractors were hired to transport and sort through all these books and other possessions, taken from more than 100,000 homes. The confiscated geology books, maps, dinosaur bones, and other items of interest or value ran into the millions from these two countries alone (Posté 1964, p. 238) (see Figure 4).



Figure 4.
Library stamp on a book taken from a public library.
USGS Library.

The German armies did not, however, locate all the book and scientific collections they desired. For after the Germans retreated from France, it was revealed that the French Academy of Sciences had created a secret repository of scientific materials, including a hundred boxes of records of the French chemist Antoine Lavoisier and sixty cases of rare mineral specimens. They were held in the *Chateau du Roy* at Journet, near Vienne, on the Rhône River about thirty kilometres south of Lyon, where the Gestapo and the ERR failed to find them (Rorimer 1950, pp. 66–67).

‘Racial cleansing’ was not limited to Jewish materials, but also to other ethnic minorities and to Slavic language works, since the Nazis intended to limit the cultural resources of races and languages. As a result, while national libraries in Western Europe were respected to some extent by the puppet governments, Russian and Polish language library collections in France were confiscated or destroyed. Anything thought not to be of value to the invaders was destroyed. Many public libraries were burned. “We hear about *auto-da-fé* [meaning here, “book bonfires”] in Orel, Kerch, Stravropol, Kharkov and in other cities; small regional libraries weren’t spared” (Stubbings 1993, pp. 435–436).

Personal theft by the occupiers was also rampant. Officers and men often took whatever they pleased, backed up by the rifles and dogs of their troops and the more highly placed military and civilian officers did much as they pleased. Rationalization of the reasons for stealing the books, art, and other items could sometimes be inconsistent. Some

2 Joachim von Ribbentrop (1893–1946) was the Nazi Foreign Minister from 1939–1945. Found guilty of war crimes, he was hanged on October 16, 1946.

generals saw the thefts as the confiscation of enemy weapons, in that maps were could be viewed as ‘weapons of war’. Alfred Rosenberg, however, spoke of preserving the materials in a large library devoted to Jewish literature, to be opened after all the Jews had been eliminated from Europe (Nicholas 1997, pp. 291–295) (see Figure 5).

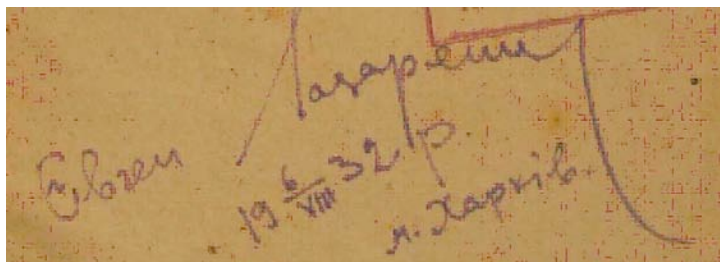
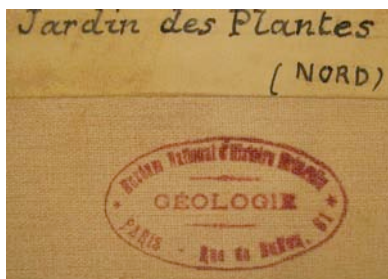
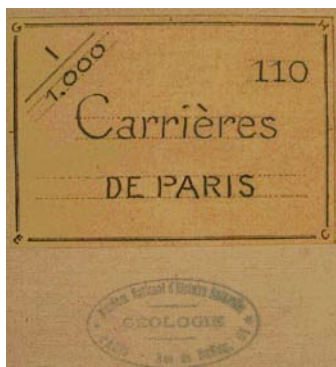


Figure 5.
Annotations in a book taken from a geologist’s personal library. USGS Library.

Hermann Göring also spoke of his personal art collection and his rationalization for stealing art to a psychiatrist after the war:

I’m glad you asked that question, because it is something I had little opportunity to answer comprehensively in court. They tried to paint a picture of me as a looter of art treasures. In the first place, during a war everybody loots a little bit. However, none of my so-called looting was illegal. I may have paid a small price—smaller than the articles were worth—for things, but I always paid for them or they were delivered to me by official channels through the Hermann Göring Division, which, together with the Rosenberg Commission [ERR], supplied me with my art collection . . . I love art for art’s sake and as I have said, my personality demanded that I be surrounded by the best specimens of the world’s art (Gellately 2004, pp. 128–129).



Figures 6a and 6b.
Property stamps of a geological society map, stolen by the Germans. USGS Library.

Alfred Rosenberg commanded the so-called *Einsatzstab Reichleiter Rosenberg [ERR] für die Besetzten Gebiete*, which was responsible for collecting art, books, and cultural objects from invaded countries, and also transferred their captured library collections back to Berlin during the retreat from Russia. “In their search for ‘research materials’ ERR teams and the Wehrmacht visited 375 archival institutions, 402 museums, 531 institutes, and 957 libraries in Eastern Europe alone” (Posté 1964, p. 247). The ERR also operated in the early days of the blitzkrieg of the Low Countries. This caused some confusion about authority, priority, and the chain of command among the German Army, the von Rippentropp Battalion, the Gestapo, as a result of personal looting among the Army officers and troops (Posté 1964, p. 250) (see Figures 6a and 6b above).

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These ERR teams were, however, very effective. One account estimates that from the Soviet Union alone: “one hundred thousand geographical maps were taken on ideological grounds, for academic research, as means for political, geographical and economic information on Soviet cities and regions, or as collector’s items” (Simpson 1999, p. xx).

In a note of Vyacheslav Mikhailovich Molotov, the People’s Commissar for Foreign Affairs, dated 27 April, 1942, presented before the International Military Tribunal, it was recorded that the Germans burned the library of 40,000 volumes belonging to one of the oldest agricultural libraries in the U.S.S.R., the Shatilov selection station in the Orel district. Also submitted to the Tribunal was the statement that:

There was no limit to the desecration of the Hitlerite vandals of the monuments and homes representing Ukrainian history, culture and art. Suffice to mention, as an example of the constant attempts to humiliate the national dignity of the Ukrainian people, that after plundering the Korolenko Library in Kharkov, the occupiers used the books as paving stones for the muddy street in order to facilitate the passage of motor vehicles (Posté 1964, pp. 240–241).

Alfred Rosenberg (1893–1946) was an early member of the Nazi Party, and editor of its party newspaper. Hitler appointed him Minister of Occupied Territories in 1941. Captured at the end of the war, Rosenberg did not long outlive the demise of his anti-Semitic Institute and his looting organization. He was found guilty of war crimes by the Nuremberg War Crimes Tribunal, sentenced to death, and executed on 16 October 1946 (Collins and Rothfeder 1984, p. 34).

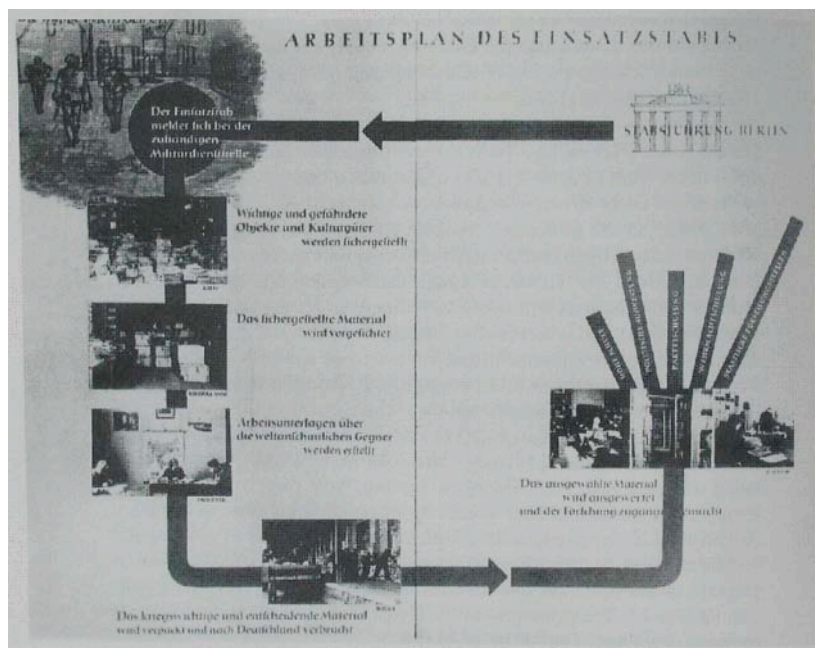


Figure 7. Chart showing the culling of scientific literature from occupied countries by the ERR. National Archives and Records Administration.

When the books and maps were acquired in each town, the *Wehrgeologenstellen* units began sorting the materials into different piles, in a manner similar to dealing the

cards out for a hand of poker. Those items of a local nature, to be used for the present actions, were put in one pile for immediate reading and problem solving. Items relating to the next country to be invaded were put into another pile for future planning and evaluation. Items on other countries, or ones thought to be of strategic value, were sent back to the library of the main geology offices in Wannsee, a suburb of Berlin. Items thought to be of no immediate or future interest were abandoned or destroyed. For the arrangements, see Figure 7 above.

5. THE BATTLE TURNED

Early in 1944, the Allies began the systematic bombing of Berlin. During the first two months of that year, it was realised that major destruction of libraries and cultural institutions would result, and there was little the Germans could do to stop the air raids. It was therefore proposed to Hitler that the books of the major libraries, and the art collections of the major museums, should be removed from the capital and other major cities and hidden in deep mine shafts and underground bunkers. Hitler only partly agreed to this recommendation. While it was expedient to remove the books and archival materials, the German citizens would get anxious if the art works were also removed from the museums. The removal of the art collections would be seen as a kind of defeatism. The solution was to remove the books, but leave the art in the museums. Within the year, however, the art collections were also taken to safety outside Berlin. Indeed, so many academic and research institutions were targeted by the Allied air raids throughout the country that only the Central Library of the German Museum in Munich was spared extensive destruction (Stubbings 1993, p. 386) (see Figures 8a and 8b).



Figures 8a and 8b. Property stamps of geological maps, stolen by the Germans. USGS Library.

The order was given for the major libraries to evacuate their collections to safer locations throughout the Reich. “[Underground] repositories frequently contained materials from more than one source. Data on repositories used for the protection of paintings, library books, and archives, as well as miscellaneous cultural materials never were analyzed to show the number of repositories used for the protection of items in each of these categories. It is known, however, that approximately 1,400 repositories were located in the US Zone of Occupation alone” (Posté 1964, p. 175). A salt and potash mine in Heringen was selected to house the Wehrmacht’s Military Geology Library, the Patent Office (*Reichpatentamt*) collection, and various smaller civilian and military collections.

6. STORAGE

Most of the materials placed in the Heringen mine came from two different government offices: the *Reichpatentamt* and the *Wehrmacht*. The Patent Library contained 200,000 titles and books in series, with 320,000 individual volumes. It was sequestered in the mine

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from January 1944 through March 1944 (see Figure 9) and was transported to Munich in October 1949. The *Wehrmacht* collection contained books, atlases, and instruments for military geology. Also, it may have contained the secret files of the German ‘V-Weapons’. According to one source, the *Wehrmacht* materials were disposed shortly before or after the incursion of the Americans on 1 April, 1945. The items were partly burned and the remnants confiscated by the American forces.³

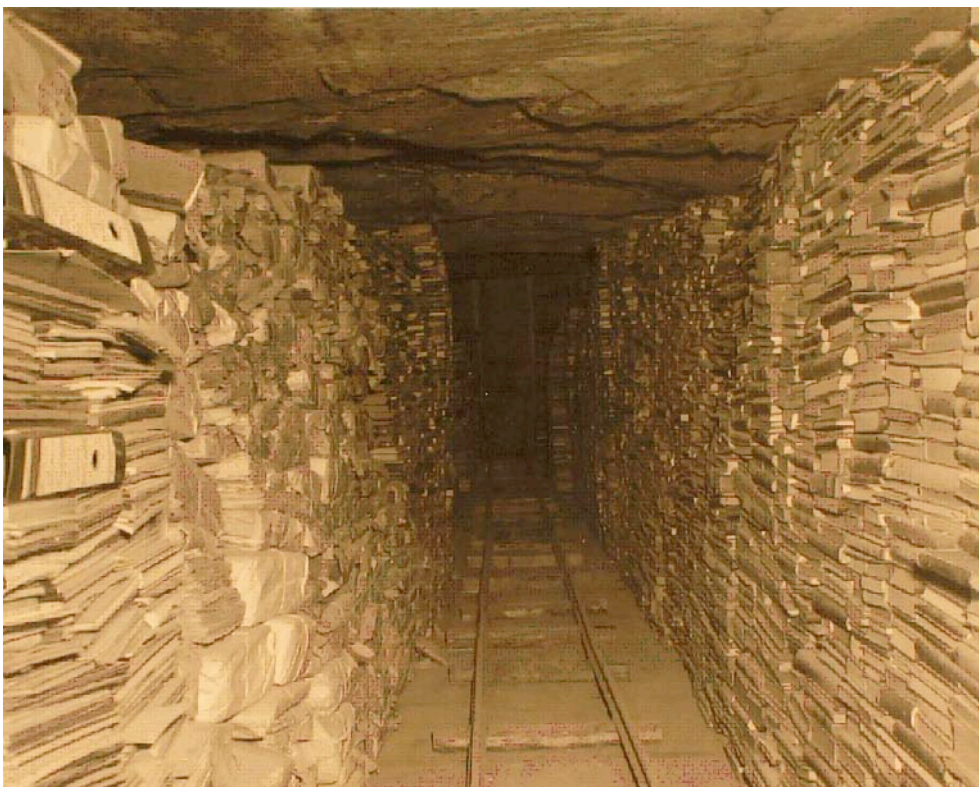


Figure 9. Books and documents from German libraries stored in mines to escape bombing. Courtesy of the National Archives and Records Administration. “Data Mining” indeed! NARA.

The Wintershall mine in Heringen was selected for these books and maps. Three main reasons can be suggested. First, the operation of the mine had come to a standstill because of the War: it was shut down though the buildings on the surface were still being used as a school for trainee miners.⁴ Not only were the miners sent away to the armies but there was little rail transportation and rolling stock available for moving the products of the mine to their customers. What railroad stock was left in Germany was used almost entirely for government and military transportation.

Second, the mine was relatively undamaged, and available for use. The potash mines of Germany were not damaged seriously during the war, either by bombing or Allied attacks. The principal damage to the mines was due to vandalism of ‘displaced persons’ or former slave laborers (East 1947, p. 14). Also, the mines were deep (about 750 meters) and

3 Unveröffentlichte Archivquellen aus den Beständen des Werra-Kalibergbau-Museums Heringen.

4 “The Mining and Refining of Potash in the American and British Zones of Germany: Part II.” 1947, 87–90. The mine was visited on 19–20th August, 1946.

because of their depth, there was little danger from Allied bombs, and if the mine tunnels or shafts collapsed due to bombing, the contents could probably be restored in a reasonable amount of time.⁵

Third, the mine was dry. While the mine was unsuitable for manufacturing because of the heavy corrosion of exposed metal by the salt, it was dry enough for storing papers. Under normal conditions, the potash beds are entirely devoid of water. Because the mines were relatively dry they provided an excellent site for storage of paper materials, except for small amounts of leakage through the lining of the shaft where it penetrated a water-bearing zone (Rice 1927, p. 62).

There are a number of mines in the area. The Wintershall potash operation was based in the northwestern part of the Werra–Fulda potash basin, about 60km south-west of Kassel. The Grimberg (Wintershall) and Heringen mine shafts were located on either side of the River Werra at Heringen itself (British Sulphur Corporation, 1966, p. 118).

The books, maps and materials were stored in the mine to protect them from the fire bombing of the larger German cities. Interestingly enough, before war was declared, the output of the mine was also used for the manufacture of incendiary bombs, using the magnesium found along with the potash. Indeed, it was expected that the mine operations would be expanded because of the war demands.

The growth of the Magnesium Industry under the Four Year Plan 1936–1939 The many efforts which have been described proved successful. By 1938, in spite of the fact that the many large Wehrmacht orders were nearing completion, particularly for the incendiary bombs, production was not only kept up but, over and above that, the Stassfurt plant, until now idle, with production facilities for 4,200 tons per year, was put into operation at the end of 1938. Included in the development of magnesium production for 1933 to 1935 was the planning of the expansion in case of mobilization. The plants built in Aken, Stassfurt, and Heringen were therefore planned in such a way that they could be expanded at any time.⁶

By 1944, competing requirements for the war in labor and new railroad construction reduced the mine's priority, so the mining and transportation activities could not be maintained.

The military geology books and materials were sent to Heringen by rail, and the mayor of the town was instructed to arrange for a work crew to help with the unloading and storage of the books.⁷

[Dr] Rudolph⁸ stated: There are records of the Geological Institute in the mine. Everything about the storing of records was so secret we don't know of other places than Wintershall. We only know of the State Library which was supposed to come here and was transferred to Hatdorf. . . . The archives may deteriorate in the mines but there is no danger from water but from salt dust. We checked the air in these mines and it was found to be too warm so some

5 "The Mining and Refining of Potash in the American and British Zones of Germany: Part II" 1947, 87–90.

6 Nurenburg Military Tribunal. Volume VII, 980. See the website, accessed on August 17, 2005: <http://www.mazal.org/archive/nmt/07/NMT07-T0980.htm>

7 "G-4 Functions in ETOUSA Operations–Merkers-Herringen [sic]-Frankfurt Areas in Germany 9 April to 22 April 1945" File 105, Special Report on Discovery and Disposition of German Gold, Numeric-Subject Operations File 1943–July 1945, Historical Section, Information Branch, General Staff, G-5 Division, SHAEF, Records of Allied Operational and Occupation Headquarters, World War II, RG 331, National Archives at College Park, MD. Appendix VI.

8 Dr Rudolph "I am the director of the main Wintershall office, formerly in Kassel and now in Dorndorf. I am familiar with all the mines".

paintings were not stored here. I did not hear of any other place where treasures or paintings were stored other than the Wintershall mine.⁹

One account claims that the Wintershall mine was booby-trapped so that it would blow up if the doors were opened incorrectly. This would have been in compliance of Hitler's orders that the resources of the Reich were to be destroyed rather than be turned against the German people but the explosives in the mine were probably for civilian use. (Some cylinders of liquid oxygen were, however, found at the mine.) Any electrical detonation devices and wire probably could not have withstood the corrosive nature of the salt mine for over a year, and may have failed due to metal corrosion, corroded electrical contacts, or for other reasons (Lamont, Goldsmidt and Merlub-Sobel 1946, pp. 7–8). Whether the mine was booby-trapped or not, the American soldiers were later able to penetrate and explore the mine with little hindrance.

Whatever the reasons for choosing the mine, the Patent Office and Military Geology libraries were placed in the mine, the doors were locked and sealed, and there the documents remained in the dark, untouched and unused, for over a year.

7. LIBERATION

Early in 1945, the Allies began to invade the German homeland. By the time the US Army units reached Heringen, there were constant small actions as disorganized members of the Germany army, the SS, the Hitler Youth, and other groups tried to oppose the American advance. When the American soldiers reached Heringen, they met a small band of *Waffen SS* and other troops. The SS troops were ordered not to surrender, but to fight to the last. As the Americans and Germans exchanged gunfire, a slow freight train passed between the two groups. One account says that an American soldier threw a grenade in an open boxcar of the train as it passed. What he didn't know was that the train was a military freight train filled with ammunition, and it exploded and burned near the Wintershall mine. The explosion was caught on film from across the river by the fourteen year old son of the mine's chemist, Dick Reinhard.¹⁰

Various American groups have described the advance through this mining section of Germany. For example:

[T]he 90th Division . . . reached the Werra River on April 2nd (1945), crossed immediately, and discovered that there, in a last desperate effort, the enemy had erected a line beyond which the Americans were not to advance. Ignorant of the German determination to hold at all costs, however, the 90th advanced, smashed the line, and moved forward. Vacha was taken despite stiff opposition, as were Dippach, Oberzella and Merkers. One regiment was detailed to guard the treasure at Merkers, and the rest of the Division pushed ahead. All roads were lined with liberated slave laborers, some walking aimlessly, becoming slowly accustomed to their freedom, some walking determinedly, burdened by huge packs, with their eyes firmly fixed on the road leading to home. Allied prisoners of war were liberated in increasingly large numbers: American, British, French and Russians. The German Army was dissolving into a hodge-podge of Volksturm, Hitler Youth, highly disorganized veterans and a few SS soldiers.

9 "G-4 Functions in ETOUSA Operations—Merkers-Herringen [sic]-Frankfurt Areas in Germany 9 April to 22 April 1945", File 105, Special Report on Discovery and Disposition of German Gold, Numeric-Subject Operations File 1943–July 1945, Historical Section, Information Branch, General Staff, G-5 Division, SHAEF, Records of Allied Operational and Occupation Headquarters, World War II, RG 331, National Archives at College Park, MD, Appendix VI, p. 5.

10 H. Richard Reinhardt came to the US after the war, joined the US Army, and served in Korea.

As usual, resistance was encountered at only infrequent intervals, and as usual, it was quickly overwhelmed (Anon. 90th Infantry Division, 1946, pp. 78–79).

As the armies advanced into Germany, they found large caches of art, gold, and documents hidden in mines and underground facilities. With each Army group were assigned special teams, looking for commercial and scientific data. The Counter-Intelligence Office wrote out explicit instructions:

In forward combat areas . . . [f]oremost among these targets will be . . . buildings . . . and installations known or suspected to contain documents of Counter-Intelligence value. . . . The seizure of enemy documents which may contain information of Counter-Intelligence value is a primary Counter-Intelligence function. Often, however, such documents will contain information of value to combat intelligence, or documents desired by documents sections will be found with documents of Counter-Intelligence value. In such cases, Counter-Intelligence personnel will cooperate with and assist document sections and combat intelligence staffs in the procurement of material (Anon., SHAEF 1945, pp. 10–12).

Other teams known as T (Target) Forces were sent in to locate scientific information.

Some were composed of scientists in uniform whose mission was to comb German plants and laboratories for scientific and industrial secrets on anything from plastics to shipbuilding, V-weapons to poison gas, synthetic oil, supersonic wind tunnels, and patents of research and development projects likely to be of value to the world in general and to the Allies in particular (Sayer and Botting 1984, pp. 67–68).

Other teams were sent out by other agencies: “April 21 [1945]—In the last half of April, with German armies collapsing, Allied technical teams moved into Germany to capture German scientists, documents, and equipment. A team of nuclear scientists from the United States, operating under the code name ALSOS,¹¹ had already captured almost 1,000 tons of uranium and equipment”.¹²

Library collections, Nazi archives, art, and other items were placed under the control of the Monuments, Fine Arts and Archives Program (MFA&A) of the US Army, whose charge was quite different from the ERR. Their postwar objectives and orders read:

To protect, preserve and control all cultural structures, objects, archives, books and documents and to secure them so far as practical from deterioration as a result of war and military occupations; to make cultural materials in Germany, of whatever ownership, available for restitution or replacement in kind as directed by the Office of Military government for Germany (US); and to charge German civilian agencies concerned with cultural structure and materials with their administration and upkeep as rapidly as is consistent with the achievement of objectives of Military Government (Military Government Regulations, 1945, pp. 18–101; also in Posté 1964, p. 221).

Members of another team, the Joint Intelligence Objectives Agency (JOIA), were the ones who actually discovered and opened the Wintershall mine. It was given direct

11 Unlike many other Army names and team designations, this is not an acronym. It is the Greek word for a ‘grove of trees’, ironically, and perhaps, facetiously named after Major General Leslie R. Groves, head of the US atomic bomb project. See: “Nazi’s Atomic Secrets”, *Life*, 23 October 1947, 123.

12 “Engineers in World War II—1945”, *Bridge to the Past* No. 2, January 1995. See: <http://www.hq.usace.army.mil/history/bridge2.htm>.

responsibility for operating the foreign scientist program (initially code-named 'Overcast' and subsequently 'Paperclip'). The unit was disbanded in 1962.¹³

Their account of the opening of the Wintershall mine in Heringen was told by one of the JOIA members shortly after the war. He mentions the bottles of liquid oxygen placed on top of the documents, which indicate they may have been sabotaged with the commercial explosives, which somehow did not ignite.¹⁴ (Harclerode and Pittaway 2000, p. 100) Perhaps the wires or ignition system had corroded with all the salt in the mine. One two man search team found the mine and backed up to the doors of the mine, they flipped a coin to see who would drive the jeep, and after the loser of the toss tying a tow rope to the mine doors, he stepped on the gas and pulled the doors off.

The collection [of all captured German scientific documents] is today chiefly in three places: Wright Field (Ohio), the Library of Congress, and the Department of Commerce. Wright Field is working from a document "mother lode" of fifteen hundred tons. In Washington, the Office of Technical Services (which has absorbed the Office of the Publication Board, the government agency originally set up to handle the collection) reports that tens of thousands of tons of material are involved. It is estimated that over a million separate items must be handled, and that they are, very likely, practically all the scientific, industrial and military secrets of Nazi Germany (Walker 1946, pp. 329 *et seq.*).

One American soldier recalled the evacuation of the patent and geological materials from the Wintershall mine.

The delivery and safekeeping of the works of art provided for, Col. Morris next turned his attention to the other valuable materials which the Americans had found in mines near Merkers. Perhaps the most important of these items were the German patent records, all of which had been stored in a salt mine near Heringen. Morris discussed the patents matter with his superior, Gen. Crawford, and they decided that the patents should be removed to a secure location immediately. . . . By 7 am on April 21 it had become obvious that the loading operations was being delayed by slow-moving mine equipment. Moreover, Col. Morris discovered that the bulk of the 400 tons of volumes in the mine consisted merely of reference material, periodicals and older patent records of other countries. For those reasons, Morris decided to limit the shipment to German Patent, German patent applications, German patent abstracts, and other important records. . . . The only other items removed from the Heringen Mine consisted of 42 high quality microscopes. These, like the patent records, were taken to Frankfurt (Busterud 2001, pp. 152–154).

Evidently, this officer did not know that the geological materials were part of the haul from the mine, and were included with the patent records. They were not separated at the time.

The original collecting point in 1945 was the Rothschild Library in Frankfurt, but the overwhelming numbers required them to find a new location in the I. G. Farben building in Offenbach. This five-story building was soon renamed the Offenbach Archival Depot (Stubbings 1993, p. 397; Posté 1964, pp. 226–227).

13 US National Archives. Records of the Office of the Secretary of Defense, Record Group 330, Office of Research and Engineering, Joint Intelligence Objectives Agency. See their site, accessed on 17 August, 2005: <http://www.archives.gov/iwg/declassified-records/rg-330-defense-secretary/>.

14 Hitler had issued an order in October 1943 that all historic buildings, works of art, etc., whether legally or illegally obtained, should be destroyed rather than fall into the hands of Germany's enemies and used against the Reich.

8. REMOVAL TO AMERICA

Most of the items of military intelligence interest never made it to the Offenbach Depot for sorting. They were shipped directly to the US research institutions for disposal. However, many items of interest emerged during the sorting process. In January 1948, 1,157 shipments were made from the Offenbach depot to the G-2 Document Control Section (Posté 1964, p. 290). The report does not indicate how many other shipments were made to the US Army Corps of Engineers or Military Intelligence operations before or after that date, nor how many items were in the numerous shipments to G-2.

Specialists were needed to comb the captured materials to look for items of interest to scientific institutions and industry.¹⁵ The question of how to handle all the many tons of captured documents was discussed repeatedly in the scientific literature during the war (Murphy 1945, pp. 1530–1531).

It is not known when the Heringen materials were separated from the Patent Office materials. Without being dispersed, they were sent to New York for evaluation. There they were sorted by US Army personnel, again as if dealing cards for a hand of poker. Items of foreign technology or military value were sent to the Foreign Technology Office at Wright Air Base in Ohio. Items of cultural, literary, or rare-book value, were sent to the Library of Congress. Items dealing with commercial information or patents were sent to the US Department of Commerce. Items dealing with animal husbandry, soils or farm information were sent to the US Department of Agriculture. And the items dealing with geology, hydrology or the earth sciences were sent to the US Geological Survey.

Certainly the Patent Office Library materials were sent to the US rapidly, and presumably the army's *Wehrgeologenstellen* professional library also went there (see, for example, Figure 10). An account from May 1946 indicates that the Patent Office materials (including the geological maps and reports) were sent to the Wright Air Force Base, which since 1948 is known as the Wright–Patterson Air Force Base.

Ten tons of documents taken from the German Patent Office are now being sorted and evaluated, and will eventually be disseminated for the benefit of American science and industry. Originally seized by the US Army in Germany, the documents were shipped to Wright Field in 146 packing cases. Army officers then turned the documents over to the Office of the Publications Board, Department of Commerce, for dissemination to the public through facilities.¹⁶

Since this was at about the same time that the geological materials were sent to the Military Geology Unit of the USGS (they were present onsite by July 1946) they were perhaps part of the same shipment and were perhaps handled similarly.

15 “Evaluating German Data,” and “German Copyright Interest Seized” 1946. *Chemical and Engineering News* 24 (7), 10 April: 934 and 936.

16 “German Patent Office Documents” 1946. *Chemical and Engineering News* 24 (10), 25 May: 1393.

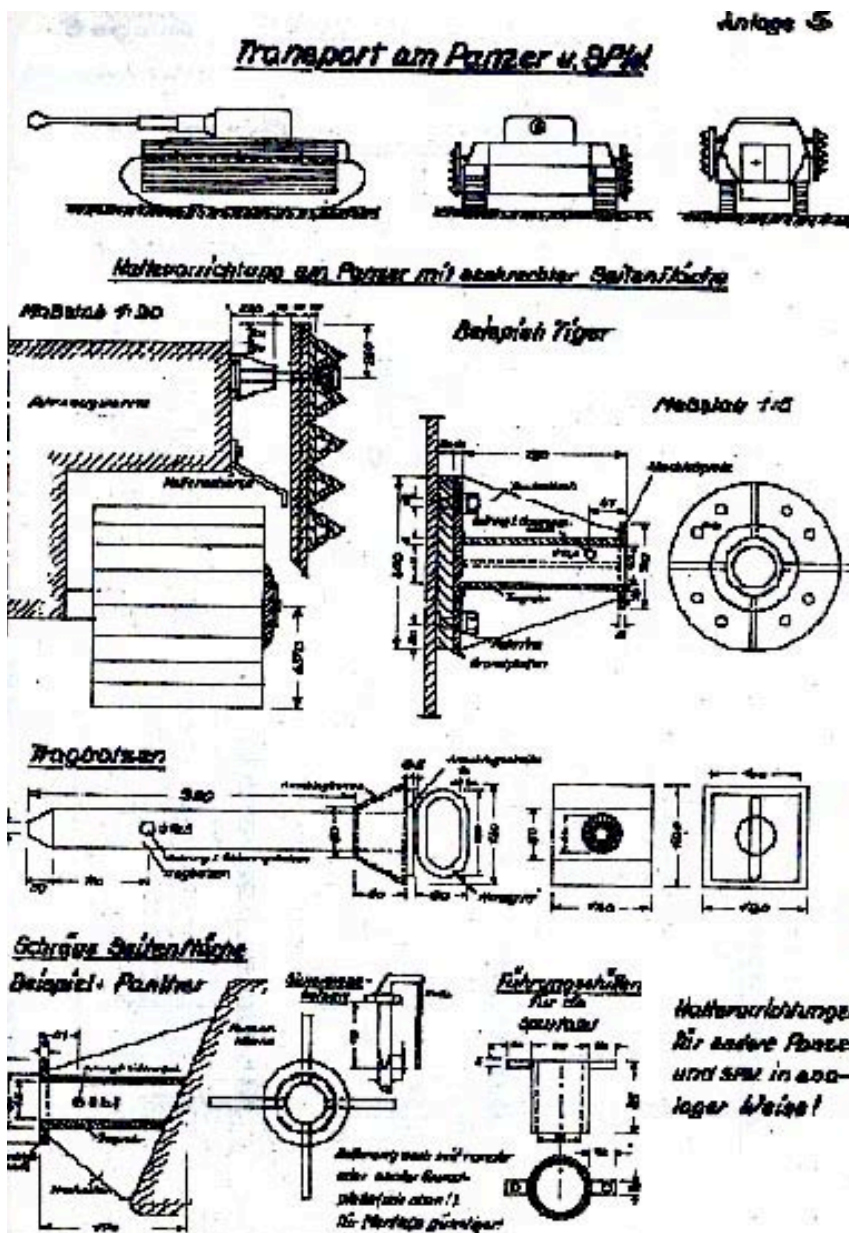


Figure 10. Instruction sheet by Nazi military geologists for Tiger and Panzer tanks, and for armored personnel carriers, on how to carry portions of portable bridge sections to be used for crossing icy mires in Russia. USGS Library.

9. USGS LIBRARY

This division of the books to various US Government agencies was done very quickly. When Frank Whitmore, head of the Military Geology Unit at the US Geological Survey, returned from Asia in the spring of 1946, there were large numbers of boxes waiting for him outside his office. His job was to go through them, and divide the materials into separate categories (“triage by content”). First, the items that were regarded as needing to be

classified were segregated. Those items that were unclassified and of a general nature were sent on to the USGS Library for addition to the scientific collection. Archives and other historical materials were sent to the National Archives and Records Administration. The items that were multiple copies or duplicates were either given to the USGS branch or division libraries or set aside for the purpose of exchange.¹⁷

As an example, excess copies of geological maps, military maps and reports, and other items of non-scientific value were offered to the archives. And many of the legal documents, correspondence files and corporate holdings of various offices were not relevant to the USGS mission. So the files of the *Wehrgeologenstab*, the National Geological Service (*Reichamt für Bodenforschung*), and the German Patent Office (*Reichspatentamt*) were transferred to the National Archives and Records Administration, now held in College Park, Maryland. There the relevant documents are now catalogued within flats 20 and 23 of Record Group 57, line sequences 72 and 73, under the title: “Military Geology Branch: German Geologic maps of Europe 1917–1945” (Rose and Willig 2004, p. 14).



Figure 11.

Title page of a book taken from a public library in Orel, USSR. The author's name and the book's title have been transliterated into German and the book was taken to Berlin, where it was added to the WG Library. Later deposited in the mine in Heringen, it was found by US Army troops and stamped with the Heringen Collection stamp. It was then added to the USGS Library, and stamped with their property stamp, accession date, and accession number. USGS Library.

The first public and published description of the Heringen Collection was mentioned in the USGS Library's annual report for the fiscal year ending 30 June 1948 (see Figure 11). Under the library policy, the Heringen materials were integrated into the existing library collection, and were not maintained or noted in the card catalog as a separate collection or resource. According to the library report, this collection was a much-needed

17 Frank Whitmore, Private Communication, 2003. Dr Whitmore served as Chief of the USGS Military Geology Unit (later Section, and later still, Branch) between 1946 and 1959.

resource of items printed in Europe during the war by the Nazis, and of captured materials from other countries in Central Europe that were similarly embargoed and denied to the American scientific community. At the same time, the USGS Library was not able to fully utilize the collection because of a lack of personnel for cataloging and because there was not enough space to hold the materials. Without giving the total number of cases, the report further states that by this time all but about twenty cases of the collection were received from the Army Map Service.^{18 19}

10. SO WHAT?

The question now arises: ‘So what?’. Is it important that we have the Heringen Collection? What good is it that the USGS Library has it? What is it used for? How is it used? What are the benefits derived from it?

During the war, the USGS Library staff did its part in helping with the military geology. Some of the library staff were assigned to the civilian military geology unit, as members of the research team and were charged with locating and copying needed information. Part of the Military Geology Unit staff served as bibliographers, locating resources of geological information. The reference and map librarians systematically combed the book stacks and map files of the US Geological Survey Library, the Library of Congress, National Agriculture Library, the Map Library of the Army Map Service, and as necessary procured source material from other libraries in Washington and in other parts of this and from allied countries. Other librarians systematically collected the available aerial photographs from the Army Central Film Library and the Photographic Library of the Office of Naval Intelligence. The Strategic Intelligence Branch, O.C.E.,²⁰ saw to it that the study teams received the existing intelligence reports bearing on terrain. When an assignment was received from the Office of the Chief of Engineers, the librarians immediately began to collect the source materials for the use of the analysts (Hunt 1946, pp. 65–66).

These collected reports and maps held at the USGS Library, coupled with the captured information from the Heringen mine, have been exploited both financially and academically since the war. The commercial and research value to the United States of captured scientific data and research is described in part when ‘Operation Paperclip’ prepared a press release (later classified as ‘Secret’, then later declassified) proposed for 11 March 1946, which anticipated the economic uses of this information. It read in part:

Closely related to the exploitation of the German scientists and technicians is the government program for exploitation of German developments in industrial machinery, tools, equipment and materials. Samples of these are being procured through reparations procedures for shipment to the United States where they are made available for study by American industry on a non-restrictive open-to-the-public basis.

From the above, it is evident that the government is using vacuum cleaner methods to acquire all the technical and scientific information that the Germans have. The value of this information to the United States will probably far exceed any cash reparations.

18 “Library”, *US Geological Survey Annual Report. Annual Reports of Bureaus and Offices—Part II.* (Washington: GPO, 1948), p. 215.

19 Between the accession and cataloging of the first volume on 16 October, 1947 and the end of the fiscal year on June 30, 1948, only 160 volumes from the Heringen Collection were added to the USGS Library. This is far below the USGS Library average for cataloging new materials. See: USGS Library Accessions 130001–148500, June 1947–June 1954.

20 O.C.E.: Office of the Chief of Engineers, US Army Corps of Engineers.

Information on the industrial aspects of the exploitation program may be obtained from the Publication Board of the Department of Commerce (Gimbel 1990, p. 189).

So much research had been done by the Allies and so many captured documents were collected from the Axis powers that two large government agencies were formed to help handle all these materials. The National Technical Information Service²¹ (NTIS) handles civilian research. The Defense Technical Information Center²² (DTIC) now handles military information, which includes classified materials. Both agencies were established to index these resources and make the non-classified reports available to the American public. However, DTIC does not usually store or retain map sheets.

Many of the captured Heringen maps were donated by the AMS to the Library of Congress and to other Federal Government agencies. The AMS also began a regular program to distribute duplicate or excess copies of map sheets to university and public libraries around the country. This distribution program helped provide that these captured resources could be available and widely exploited by researchers and academics through the government information and library systems.

The Library of Congress' Geography and Map Collection draws upon the captured maps from Heringen and other collections. As noted on their website:

A large number of the multi-sheet map series were also produced during World War II. All of the major military belligerents devoted extensive resources to compiling maps. . . . Following World War II, the Library acquired a considerable number of German and Japanese military multi-sheet maps captured by American military units, particularly maps of Europe produced by the German Generalstab des Heeres (General Staff of the Army) and of northern and eastern China and Manchuria surveyed by the Japanese Kwantung Army, the Japanese General Staff, and the Japanese Imperial Survey during the 1930s. Among the captured maps are tactical and operational map series produced by the Soviet General'nyy Shtab Krasnoy Armii (General Staff of the Red Army), the Glavnoye Upravleniye Geodezii i Kartografii (GUGK), and the Narodnyy Komissariat Vnutrennykh Del (NKVD) which had been initially captured by German forces, including some which contain German military maps printed on the verso.²³

A number of American universities also benefited from the distribution of the captured maps. State university libraries on the West Coast acknowledge these maps as part of their collections.

A period of great growth in the [University of California, Berkley] Library's collection came after World War II, when the U.S. Army Mapping Service (AMS) made the Library a depository for its own map publications as well as its distribution of captured maps. AMS sets cover most foreign countries of the world with major emphasis on European countries. The Distribution of captured maps contained German topographic sets covering all European countries, northern African countries, and Asian countries extending from the Middle East to India. The distribution also provided a large collection of topographic maps produced by the Japanese. These are some of the most detailed maps available for parts of China, especially Manchuria and for islands of the southwestern Pacific. The scales of AMS and captured maps vary from 1:250,000, 1:50,000, and 1:25,000 and in general were mapped during the 1930-1940's.²⁴

21 See: www.ntis.gov.

22 See: www.dtic.mil.

23 Geography and Map Division, Library of Congress. The web-page was accessed 17 August, 2005. See: <http://www.loc.gov/rr/geogmap/guide/gmillgen.html>.

24 University of California, Berkeley. See their site, accessed 17 August, 2005:

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Oregon State University's Library in particular obtained a collection of captured maps:

In 1998, The Government Publications Department merged with the Map Room collection, and we now provide reference help for both government information and maps, as well as microforms . . . (AMS) Maps. Historic maps covering most of the world, including "captured maps" liberated from German, Italian and Japanese forces in WWII.²⁵

University library circulation policies apply to captured German maps as well. As Washington State University says on its library's web-page:

AMS Captured Maps: AMS maps, British maps, and navigation charts are filed by map number; to find this number use the *Army Map Service Index* or *GSGS Map Index* in Holland Reference, located on the top of the Stack 5. Obtain a request card from the Reference Desk for each map you wish to view or check out. Fill out the card and have a librarian sign it. Take the card to Microforms and staff will retrieve the map. The AMS Captured maps are not indexed.²⁶

Today, the Heringen Collection is used on a daily basis for civilian purposes at the USGS Library. Because it is integrated into the main collection, most users are not aware that the item they are looking at came from a potash mine in Germany, over fifty years ago. All they are interested in is the information the reports and maps provide. The red stamps on the back of the maps are mute, and unless someone knows their story, they don't actually know what they are looking at.

Reference librarians use these maps and reports in a number of different ways. Answering questions from geologists, hydrologists, miners, and financiers from around the world is a routine part of the job in the USGS Library. The Heringen Collection maps have been used for water studies in the Netherlands, historical research in Poland (pre-WWI maps are also used for gazetteer and genealogical information), and for agricultural studies in Germany.

USGS research groups use the Heringen Collection in a variety of ways. The maps have helped with water research in the Ukraine, road building in Poland, and mineral exploration and development in Russia. Although the maps were stolen for military purposes years ago, the information they contain also helps civilian earth science applications today.²⁷

And they are still useful for military studies as well. For example, shortly after the Twin Towers were destroyed in New York on 11 September 2001, researchers began using the USGS Library's collection to find information on Afghanistan. Since the USGS Library is open to the public, many different organizations and researchers use the collection. The military geography studies of Afghanistan written by German soldier-geographers in the late 1930s for a planned but unfulfilled invasion, are still useful in showing military and terrain features in that unhappy land.

25 <http://www.lib.berkeley.edu/EART/tour/topo.html>.
The Government Publications, Maps and Microforms Department is located in the Valley Library.
See: <http://libweb.uoregon.edu/ec/digor/documentor/doc191/library.htm>.

26 The Manuscripts, Archives, and Special Collection of the Washington State University is in Pullman, WA. See: <http://www.wsulibs.wsu.edu/Holland/MASC/masc.htm>.

27 Rubin, Meyer, Personal communication, 12 February, 2004.

11. REPARATIONS AND RECONSTRUCTION

The subject of the return of these items is problematic, to say the least. As property of the *Wehrgeologenstellen*, these maps and reports were military equipment used to make war, and are in a sense no different from a rifle or grenade as hostile weapons. As such, they became the property of the Allies with the German surrender.

That being said, these items also include property stolen from other countries, such as Belgium and the Soviet Union. Since these maps and reports were taken from occupied countries, the claim that they should be returned has also been made. However, the claims are also problematic. Not all Russian language maps belonged to the Soviet Union, and it would be difficult if not impossible to verify the original provenance of these items. Very few of the individual publications have property stamps that show the history of their ownership.

The estimated 23,000 or so items in the Heringen Collection are intermingled within the more than a million titles in the USGS Library and are not cataloged or held separately. The only way to locate which items came from Heringen is to take the items off the shelf one by one, and to look on the title page for the Heringen Collection stamp from the US Army Corps of Engineers. The only indication of which items came from Germany is in the USGS Library's manual accessions catalog from the mid-1940s through the end of the 1950s.²⁸

Identifying ownership is thus a problem. For example, some maps do not have property or library stamps showing their original owners' addresses. Many others have been mounted on linen cloth to preserve them, and this covers or obscures most markings placed on the backs of the maps. Many books have had their owner's bookplates ripped out. Sometimes their original ownership markings have been removed, over-stamped or erased (see Figure 12). Sometimes the only marking left are commercial plates that show the map dealers who sold the original map. There is no way of knowing if these were the owners of the map, or if the stamps were left in place after having been purchased by someone else.

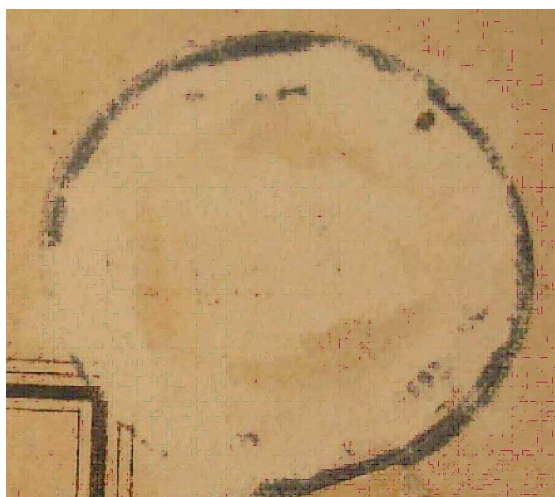


Figure 12.
A map's original property stamp eradicated from the copy in the Heringen Collection. USGS Library.

28 USGS Library Accessions Record Book, Numbers 130001–148500; June 1947–June 1954. USGS Library, Rare Book Collection, Reston, VA. Includes accession information about materials added to the collection, with an indication of those items coming from the Heringen Collection. Maps were not included in the USGS Library's accessions book.

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Though the Germans stole many of these maps during their efforts to destroy their enemies, today, these maps are used by geologists, hydrologists, transportation experts, miners, and many others, to rebuild those same countries—still damaged after two generations—to promote their current and future prosperity. The Heringen Collection materials that are held on open access in the USGS Library's map drawers and on the bookshelves and can be used by patrons from around the world.

And this is the final heritage of the Heringen Collection.

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