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FINAL REPORT  
INDUSTRY DIVISION

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*By [signature] UTZ*

One of the principal concerns in the early days of the War Relocation Authority was the finding of constructive work for the employables among the 110,000 evacuees who were shortly to be located in its ten relocation centers. After the employment needs of center operation, food production and land development were met, it was anticipated that additional thousands would be without work. In order to meet this unemployment problem, investigations were made and plans developed to carry on sizable industrial activities which would make the centers more self-sufficing and also produce products needed in the war effort.

Many different projects were investigated by a staff set up in the San Francisco Regional Office and later by a similar staff located in Washington. Two principal lines of action were developed and steps were taken to set up facilities to provide employment for a considerable number of people.

The first type was Government operated plants to produce goods to be consumed on the center such as garments, mattresses, furniture, baked goods and the like.

The second type was either privately or Government operated plants to produce materials needed for the prosecution of the war such as camouflage nets, tents, lenses and similar types of products.



The latter type of plants seemed to provide the most employment and also to make it possible, when privately operated, to pay a wage above that established for the general center operations. The established wage for center operations was \$12, \$16 and \$19 per month depending on the degree of skill required and whether or not supervision was involved. Laborers generally received \$16 per month, skilled laborers and supervisors \$19 per month and apprentices or helpers \$12. In addition everyone received living quarters, food, hospitalization and a limited allowance for clothing, and, of course, education for the children was furnished by the Government. Adding all these items together the amount was still very low compared to outside wartime wages.

One of the first projects attempted was the production of camouflage nets for the Army. Three centers were selected; Manzanar, California; Colorado River and Gila River, Arizona. The U. S. Corps of Engineers erected the necessary buildings to garnish the nets and provided the other facilities needed. At Manzanar where the first plant was completed the U. S. Engineers operated the factory. Standard wages of \$16 and \$19 were paid the evacuees and a day's standard production was established at 1,000 square feet of garnished net per worker. When a worker had completed his 1,000 square feet of net he was through for the day. Before long some of the workers had become so proficient that they were through for the day before noon. This caused considerable dissatisfaction among workers in the warehouse

*Camouflage  
Net Factory*

*Santa  
Ana  
well*



and in the cutting room where the work was not done on a stint basis. Also, other workers on the center objected to putting in eight hours work on their jobs when the garnishers were only working one-half day or less. For this reason and also because labor organizations and others were objecting to the use of low paid workers in this field, the plant at Manzanar closed down in December, 1942.

The U. S. Corps of Engineers decided to lease the other plants at Gila River and Colorado River to a private operator and in turn purchase the nets from him. In order to allow for full production and to equalize the returns so that those not able to work in the net plants could secure some additional return, a payment plan was worked out as follows:

The private operator of the camouflage net plant paid prevailing wages for the entire production per worker. For the garnishing of the first 1,000 square feet the worker received the standard wage of \$16 per month. The difference between the prevailing price paid for 1,000 square feet daily production and the \$16 paid the worker for the month went into a trust fund to be distributed on some basis to all evacuee workers on the center. Payment for the amount of net garnished daily per worker over and above the 1,000 square feet was made to the individual worker at the standard prevailing price. Many of the workers became astonishingly proficient at this work and certain individuals were able to garnish as much as 3,800 square feet per day. This brought the returns for certain workers up to \$17 or \$18 per day over and above their standard \$16 per month wage.



These two plants operated over a period of 5 or 6 months and produced several million square feet of garnished nets. By May of 1943 both plants were closed down partly due to the fact that sufficient nets had been produced for the time being and the U. S. Corps of Engineers decided to secure any additional nets needed through other channels. The high wages earned by some of the workers also created considerable dissatisfaction among those not employed in the camouflage net factory during its operation. The sizable trust fund which was set up under this arrangement was later distributed among all the workers on the center.

Another factory was planned for the Tule Lake Center designed to manufacture tents for the Army. The building was constructed and power equipment purchased for the operation of this factory. The plant was to be operated by the Authority under an agreement with the War Department under which the latter would furnish the materials and the Authority would supply the labor and other operating costs. Previous to actual beginning of operations the War Department cancelled the agreement and no tents were manufactured at the plant, the major reasons again being the objection of organized labor and private industry to Government competition with private industry.

Tents:  
Tule  
Lake

Due to the high degree of skill shown by the evacuees in many types of work, consideration was given to the manufacture of lenses at the Heart Mountain Center. A private operator entered into an agreement with the Authority whereby the evacuees would work in a

Lenses  
Ht. Mt.



lens grinding plant at this center and the Smaller War Plants Corporation would furnish the funds for the construction of a lens grinding factory. Lenses were to be disposed of to the Government. By the time the building was completed negotiations had not been completed for the disposal of the lenses and the operator was unable to carry out his plans for the operation of the lens grinding plant.

Considerable work was also done at the Heart Mountain Center toward the establishment of a ceramics plant. Arrangements were made for the purchase of a plant in New York City to be shipped to the Heart Mountain location. However, the project was not completed due to the high cost of setting up a complete plant and the serious objection on the part of organized labor to the operation of such an industry under the circumstances existing on the relocation centers.

Ceramics

Ht. Mt.

Silk screen plants were established and operated at two centers, Heart Mountain and Granada. The equipment for both of these plants was secured from surpluses of NYA or WPA at no expense to the Authority. Existing buildings were used and a staff of artists and other workers trained at each of these two centers. A considerable amount of the work completed in these centers was used for normal center activities. Posters were developed to use in connection with various educational programs. At Heart Mountain the plant produced a series of fire prevention posters which were extremely valuable in creating a fire consciousness among the evacuee population at the center.

Silk  
Screen

In addition to the local use, approximately 4,000 posters were printed by the silk screen process at Heart Mountain for the Training



Aid Section of the Bureau of Naval Personnel. Materials were largely furnished by the Navy and plant equipment and personnel by the Authority.

At Granada where somewhat more equipment was available, the silk screen plant operated on a larger scale. Approximately 250,000 posters were produced for the Training Aid Section of the Bureau of Naval Personnel. At retail prices, approximately \$100,000 worth of posters were produced at a cost of about \$27,200. This plant was quite successful not only from the point of view of production but also as a training program. Out of approximately 150 different workers who were employed at one time or another in the silk screen shop approximately 90 are now or have been employed in silk screen work in various communities over the country.

In the early spring of 1943 a small plant was established at Gila River to produce ship models to be used for training and identification purposes. These ship models were also manufactured for the Training Aid Section of the Bureau of Naval Personnel. Some 800 models were produced consisting of cruisers, destroyers, battleships, carriers and the like. These ships were built on various scales ranging from 1" to 60" to 1" to 1". Approximately 50 people were employed in this plant and the quality of workmanship was unusually high considering the very limited tools and equipment that were available for the work.

A number of other projects were investigated for possible use but discarded for one reason or another. Production of angora rabbits

Ship  
Models

Other  
Rabbits



at the Granada center was considered quite seriously but due to the high initial cost and the limited outlet for the product, it was never initiated.

Consideration was also given to the establishment of a cooperage mill at the Rohwer center. Again problems of equipment and outlet for the finished product as a Government enterprise made it appear of doubtful value.

Probably the most successful work in the industrial field was carried out in connection with the production of items for center consumption. Here the produce found a ready outlet either as issued by the Government or through Business Enterprises, the cooperative operated by the evacuees themselves. In some cases the Business Enterprises operated the plant and sold the product through their stores on the relocation centers.

Clothing factories were operated at Manzanar, Heart Mountain and Minidoka. This equipment also was secured through surplus channels at no cost to the Authority. At Manzanar some 70 people were employed in the manufacture of all types of garments, including dresses, coats, trousers, pajamas, jackets, nurses' aprons, doctors' smocks and a host of others. The plant was set up on a regular industrial basis and an excellent quality of product was delivered. Certain of the items, such as nurses' aprons, doctors' smocks, cooks' aprons and hats and coveralls, were manufactured and issued by the Authority as part of its regular program. Some of the same type of products were shipped to Central Utah and Tule Lake for issue by the Authority to workers on those centers.

Items for  
Center  
Consumption

Clothing  
Factories



Other types of garments were sold at cost to the Business Enterprises at the Manzanar Center and in turn to Business Enterprises at Topaz and Tule Lake. The Government bought the materials and supplies, furnished the equipment, paid the labor and overhead expenses, and an accurate cost record, including overhead, was kept on each item. The advantages of production of this type were passed on to the evacuees in the lower purchase price paid for garments, and also to the general public, due to the fact that a group numbering many thousands of people were not in competition with the general public for this type of goods on the open market.

The clothing factory at Heart Mountain was considerably smaller and produced only a few types of garments. The outlet for the products was again WRA issue and sale through Business Enterprises at the Heart Mountain Center.

The Minidoka Center also organized and operated a small garment factory, which confined its activities to the issue of clothing, principally gloves and work aprons, to evacuees.

The Manzanar center established a mattress factory in order to supply the center with mattresses for the evacuee quarters. Some 8,000 mattresses were manufactured, a number sufficient to supply the needs of the center. The quality of these mattresses was very good and the cost was comparable to an inferior grade of commercial mattress.

Two centers, Heart Mountain, Wyoming and Jerome, Arkansas set up sawmills in order to produce lumber for their own requirements.

Mattress

Sawmills



The sawmill at Heart Mountain was established on public lands and secured the timber for sawmill operations from the adjacent National forest. Lumber was produced to use in connection with the construction of additional buildings required on the center and for temporary structures used on the irrigation system. Some \$35,000 worth of lumber was produced in this mill.

The small mill at Jerome, Arkansas secured its logs in the course of the clearing program on the center lands. Since most of the timber was second growth oak satisfactory lumber was produced for the construction of bridges, culverts and many of the buildings. Some \$20,000 worth of lumber was produced by this small mill.

Nearly all of the relocation centers set up cabinet or carpenter shops for the purpose of manufacturing furniture and other equipment required in the operation of the centers. Tule Lake, Heart Mountain and Manzanar developed cabinet shops which produced sizable quantities of furniture and equipment much of which was of very satisfactory quality. In addition to office equipment such as desks, tables, file cabinets and the like, considerable furniture was manufactured for use in schools, hospitals and for the furnishing of staff quarters. The Tule Lake shop manufactured hundreds of pieces of equipment such as breakfast tables, chairs, dressers, bookcases and other items of required furniture. The Tule Lake shop also produced tables, chairs and desks not only for their own school but also in limited quantities for the schools of other centers. While in many cases this furniture was not of as high a quality as that produced by the commercial furniture factories, it was adequate for the temporary requirements of the Authority.

Carpenter  
Shops



In nearly all of the relocation centers, considerable work was done in the production of such items as paper flowers and other items which could be used for decorations on the center. In most of the areas only a limited quantity of flowers could be grown on the center. At occasions where flowers are ordinarily in demand, such as weddings, funerals and assemblies of one type or another, the paper flowers and other ornaments were used as a substitute. Many of the corsages, bouquets, wreaths and the like were unusually realistic.

Paper  
Flowers

At the Colorado River Center and at one or two others, considerable art work was produced and limited quantities were disposed of either to other evacuees, staff members, or in some cases to parties on the outside through the local cooperative business enterprise organization.

Art  
work

The balance of the manufacturing work on the various centers consisted of the processing of foods. Japanese-Americans are particularly fond of bean sprouts, tofu, noodles and shoyu sauce. Also, these products were difficult to secure in the outside markets. Substantial quantities of bean sprouts and tofu were produced some of which was issued as part of the regular diet through the Mess Section on each center and a portion was sold in the cooperative stores to the general evacuee population. This same was true of shoyu sauce which is used as seasoning.

Processed  
Foods

Originally a bakery was planned for each of the centers. It was expected that there would be a substantial saving to the Government in the baking of bread and possibly pastries on each of the centers

Bakery



as compared to the purchase of the commercial product on the outside. It was extremely difficult to secure bakery equipment during the war; consequently only one of the centers, Tule Lake, ever completely set up and operated a bakery. This bakery has been quite successful producing on an average of about 3,000 pounds of good quality bread per day.

Several of the centers, particularly Gila River and Manzanar, set up small dehydration plants with the idea of using this means of preserving surplus agricultural products. Due to the fact that both of these areas had comparatively long crop seasons, the value of such a plant was comparatively low. In addition most of the dehydrated products were not nearly as well liked by the evacuees as were the fresh vegetables.

It might be inferred from the above discussion of the various industrial efforts that their operation was largely unsuccessful. The principal factor, however, that caused the Authority to abandon most of these industrial plans was the speed with which evacuees relocated in outside normal communities. When the centers were first established it was generally expected that most of the evacuees would remain on the center, possibly for the duration of the war. After a thorough screening it was found possible very early in the program to allow a great many of the evacuees to leave the centers and to engage in activities outside the centers where there was an acute shortage of

Dehydration

Evaluation



labor. Consequently, a steady stream of people from each of the centers moved out, eliminating to a large extent the need for the types of industrial employment which were originally conceived to be necessary on most of the centers.

A second factor which made the establishment of these industries impractical was the unexpectedly large number of personnel required to carry on the housekeeping activities on a relocation center. The number required to do the normal maintenance work, to operate the mess halls and other activities on the center was vastly larger than originally anticipated when the centers were established.

These two factors, relocation and increased operating requirements accounted largely for the discontinuance, or failure to originally establish, much of the industrial program that was planned for the centers during the early months.