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PID/IB - 334/63  
29 November 1963  
Copy 6 of 8

MEMORANDUM FOR: Chief, Military-Scientific Division, ORR

ATTENTION : [redacted]

THROUGH : Chief, Requirements Branch, Reconnaissance Group, CGS

FROM : Chief, CIA/PID (NPIC)

SUBJECT : Arsenal and Explosives Plants at Tai-yuan, Communist China

REFERENCES : (1) ORR Requirement No. C-RR3-80,522/63  
(2) CIA/PID Project No. C 1417-63

1. This memorandum is forwarded in answer to the above referenced requirement which concerns the arsenal complex at Tai-yuan, Communist China.

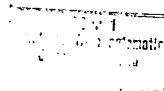
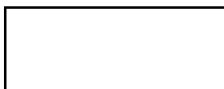
2. An examination of all available collateral was made in an attempt to arrive at a total of reported plants of this nature within the Tai-yuan area. This was considered to be a prime prerequisite in order to complete this analysis fore so many of these facilities are similar in appearance to the normal light and heavy fabrication industries. In as much as the definition of an arsenal is given as - "a place for making or storing weapons and other munitions" - in some cases it was difficult to differentiate between those facilities reported in collateral, targeted, or appearing as arsenals on photography, to be definitely identified as such. It was also difficult to separate some of these facilities from those actually engaged in production of this type from those possibly producing other products for either civilian or military usage. So it is with this memorandum, all of the facilities at Tai-yuan falling within the above range of identification showing any possible connection with arsenal-type activity and having any indication of change since 1959 have been included in this report.

3. The 1959 period was selected instead of 1960 (as per your request) for this study, for good quality photography of the Tai-yuan Area does exist while none was available covering the 1960 period. The comparative base was provided by good quality photo coverage of the facilities as they were in [redacted] compared to the state they were in [redacted]

In addition to the [redacted] a photo-mosaic of the complex taken from photography of [redacted] of the same month and year as [redacted] (See Figure 2), is provided herein to supplement Figure 1 and to index Figures 3-14.

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4. This study involved many facilities and did not permit a detail analysis of each one within the due date of the referenced requirement. As such, only a general treatment of the complex was possible on each facility. Detail analysis was limited only to the basic identification of the activity associated with the facility. Where possible, those facilities reported as arsenals yet having the appearance of heavy industry, were studied for the possibility of identifying tell-tale evidence of ordnance-type production. The enclosed graphics, tied closely to each plant description, have been provided herein to illustrate graphically the major changes that have occurred, and to provide you with complete coverage in the event you might need additional information. No correlation could be made between these facilities and the installation numbers you provided (i.e., installation numbers - 247,342, 743, 763). Description and analysis concerning the Tai-yuan complex is as follows (each facility is treated separately as is indexed in an arbitrary order as shown on Figure 2):

a. Possible Munitions Production Plant (See Figure 3)

This plant is located approximately 5 nm NNW of the reference point (RP) at 38 01N - 112 34E (No Bombing Encyclopedia - BE No. could be located). This facility appears to be engaged primarily in the production of ammunition; i.e., the buildings tend to indicate activity of a handling or loading nature, like shells etc. In addition, the different type storage buildings and bunkers could be used for the storage of different explosive components, such as propellants, fuzes and/or initiators. This plant appeared to be in mid-to-final stages of construction in 1959. Many of the buildings were completed, but the final barricading, above and below ground steam and water service lines and inter-connecting service roads were not completed. At that time the plant was probably not operational. The 1963 photography revealed that the plant was complete and probably fully operational - the barricading was completed; the steam and water lines were completed and were buried, the trenches were covered; and the inner service road and rail connections were completed and in use, as evidenced by eleven box cars and a few vehicles.

b. Probable Ammunition Storage Area (See Figure 4) - located approximately 5 nm NNE of the RP at 38 01N - 112 34E (No BE number recorded). This area is used strictly for storage, there are no production facilities here. This is probably closely associated with the above mentioned plant having a single function of being used for storage and shipment of completed product(s). Here too, the presence of different type structures is probably indicative of a variety of items. This facility has not changed significantly since 1959 other than its outward appearance. It looked new as if it was in final stages of construction in 1959. The 1963 photography showed vegetation growth throughout the facility and the rail and road service points were more clearly defined.

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c. Explosives Manufacturing Plant (See Figures 5-7) - located approximately 3 nm N of the RP at 37 59N - 112 32E (No BE number recorded). This facility was in early-to-mid stages of construction in 1959 and at that time did not appear to be operational - the buildings were in various stages of construction; ditching and road beds indicate early construction; many of the buildings in the eastern portion of the plant were in the "footing" stage of construction; and the test area was considerably different than it appeared in 1963 (See Figures 5 & 7). In 1963 (See Figure 6) the plant was in mid-to-final stages of construction and appeared to be at least partially operational. The only major additions to the plant since 1959 includes - two newly completed barricaded storage buildings in the upper northeast corner; the completion and expansion of the test area; and several completed processing/production buildings. Twenty-two pieces of RR rolling stock were noted in the plant area, this included 17 tank cars and 5 open/flat cars. Other changes include: large quantities of open storage along the north fence; the above and below ground steam and water lines in the western section appear completed (Those in the eastern section are still not completed) several buildings in the eastern section have been completed, others are in various stages of construction; and, the probable nitro-glycerine areas, located in the center of the plant show some degree of completion. The western "nitro" line now appears complete and the other two lines were in early-to-mid stages of construction. Construction equipment is evident throughout the plant area. The new addition to the test area (shown as unidentified area on Figure 7), is probably all associated with testing and "pilot" plant-type operations and not production. The long linear test activity occupying the eastern half of the test area, appears to be two horizontal artillery test ranges.

d. Explosives Manufacturing Plant (See Figure 8) - located approximately 3.5 nm SW of the RP at 37 53N - 112 29E (No BE number recorded). This plant appears to be essentially the same in 1963 as it did in 1959. There are a few minor changes within the plant proper, and in the immediate surrounding area. A few sections of wall or barricading have been added in the center of the handling/loading area. This plant is supposed to be producing initiators and detonators among other munitions. There is also a slight difference in the vegetation growth between 1959 and 1963. The plant does give the appearance of being active and is probably operational.

e. Explosives Manufacturing Plant (See Figure 9) - located in north central Tai-yuan approximately 2 nm SSE of the RP at 37 54N - 112 33E [redacted]. This plant is listed in the Bombing Encyclopedia as an Explosives Manufacturing Plant; and it is reported as an arsenal in Air Force Manual AFM-200-113, China, Pg. 29.09, 1 May 59 (CONF.). Although the publication date of the latter report is 1959, it utilizes 1945 photography in the illustration for this facility. There is very little change

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from this photography and that of the 1959 period used in this memorandum. The major changes, although slight, in this facility have come about between the 1959 and 1963 period. On the 1959 photography changes since 1945 include: 3 buildings were added in the NE corner; the storage area in the north central section was expanded to include 18 storage buildings and 3 miscellaneous buildings; and one processing building in the northwest corner was removed. The plant appeared occupied and active on the 1963 photography. The changes evident since 1959 are: 5 new buildings have been added in the northeast corner, and six others are under construction; 5 probable storage buildings have been added along the west central fence line; the internal road system was greatly improved; and the fence line was extended to include an area of new construction in the northeast corner. This facility could be engaged in explosive component loading and handling as well as metal machining operations.

f. Explosives Plant and Storage Areas (See Figure 10) - located approximately 3 nm southeast of RP at 37 54N - 112 35E (No BE number reported). This area is reported to be abandoned, however, it does appear active and is probably operational. Most of the plant units are visible and there are several indicators [redacted]


[redacted] Most of the units visible appear to be engaged in explosives production. The possibility of shell producing or loading cannot be eliminated. Changes in the plant area since 1959 include: approximately 25 buildings have been added; the southwest fence line has been extended; and the internal road system has become more clearly defined. The storage area to the north of the plant appears to contain several [redacted] The storage area along the RR northwest of the plant is probably associated with it, and is probably used primarily as a handling and shipping point. The annotated "possible storage area" is inactive and probably abandoned.

g. Possible Arsenal (See also Figure 11) - located approximately 2.5 nm southeast of the RP at 37 53N - 112 33E. Several conflicting reports are available concerning the identification of this plant. Some of these reports and the given identification are as follows:

- (1) Bombing Encyclopedia - [redacted] - Tai-yuan Machine Tool Plant, Shansi.
- (2) USAF, 67 RT SQ. Report No. RT-7-01-60, Pages 55,56 (SECRET [redacted]) Tai-yuan Probable Mining Machinery and Equipment Plant.
- (3) USAF AFM-200-113, Chino, May 59, Page 29.09 (CONF.) - Tai-yuan "Large Arsenal".
- (4) US Army Report #ID 213992, May 60 SPIR 114-23, Enclosure 17 (SECRET) - Tai-yuan - 90th Arsenal.

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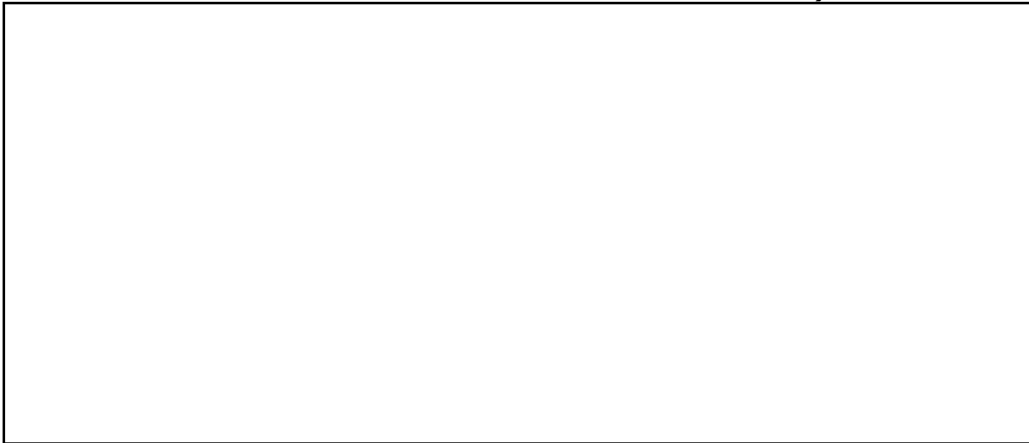

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The facility is rather large and is capable of producing heavy equipment. The plant looks active and it is probably operational. A search of the plant proper did not reveal any unusual activity that could possibly be associated with artillery, armor or related production. Very little change has been brought about since 1959. The plant contains: one forge, one forge/foundry; four large machine/fabrication buildings, 14 other machine/fabrication-type buildings, one large woodworking building (probable crate plant), approximately 6 warehouses, 6 administration-type buildings, and a steam plant with an associated gas plant.

h. Possible Arms Manufacturing Plant (See Figure 12) - located approximately 3.5 nm SW of the RP at 37 53N - 112 34E. Here also, this plant, although reported to be an arsenal (USAF, 67 RFSQ, Report No. RT-7-01-60, Pages 98, 99 SECRET ) is capable of producing a variety of items, and could not be definitely identified as such. There were no definite tell-tale features in the plant area. Although neither smoke nor steam was being emitted from the stacks in the plant, it did appear to be active and probably operational. The plant contains forge-foundry and machine/fabrication type buildings. Four large buildings were added since 1959 (2 probable machine shop buildings, and 2 machine shop/fabrication type buildings). Open storage areas near the foundry appear to be typical of this type activity. There were bins for ore/coal/scrap storage, and also associated with it were probable castings. Several gantry cranes are visible, two of which were in operation on the 1963 photography.

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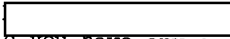

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5. The analyst assigned to this project was  who may be contacted directly on extension  should you have any questions concerning this project. This memorandum and its accompanying graphics completes this requirement.

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ENCLOSURES:

- 1 Annotated Map (CIA/PID/IB-P-763/63)
- 13 Annotated Photos (CIA/PID/IB-P-764/63 thru P-776/63)

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SEE FIGURES 6-7

TAI-YUAN  
IRON AND STEEL PLANT  
REFERENCE POINT (RP)

SEE FIGURE 10

SEE FIGURE 8

FIGURE 2. PHOTO MOSAIC OF NORTHERN TAI-YUAN

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SEE  
FIGURE - 3

SEE  
FIGURE - 4

SEE  
FIGURES - 5-7

SEE  
FIGURE - 8

SEE FIG - 9

SEE FIG - 11

SEE FIG - 12

SEE FIG - 10

SEE  
FIGURES - 13 & 14

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TAI-YUAN  
IRON AND STEEL PLANT  
REFERENCE POINT (RP)

FIGURE 2. PHOTO MOSAIC OF NORTHERN TAI-YUAN

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FIGURE 3. AMMUNITION LOADING FACILITY

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FIGURE 4. AMMUNITION STORAGE AREA

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TEST AREA

EXPLOSIVES PLANT

HOUSING

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FIGURE 5. TAI-YUAN EXPLOSIVES PLANT

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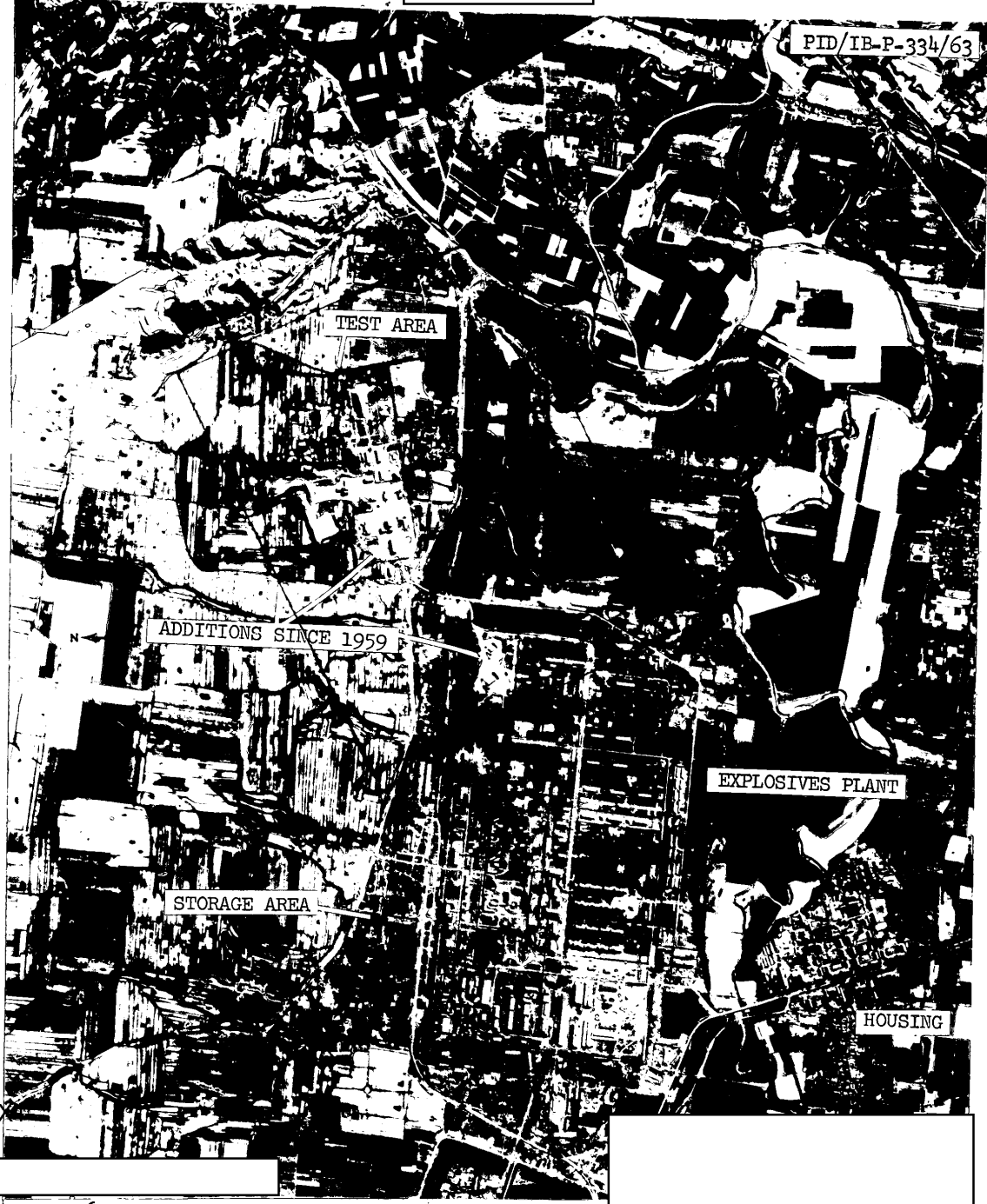
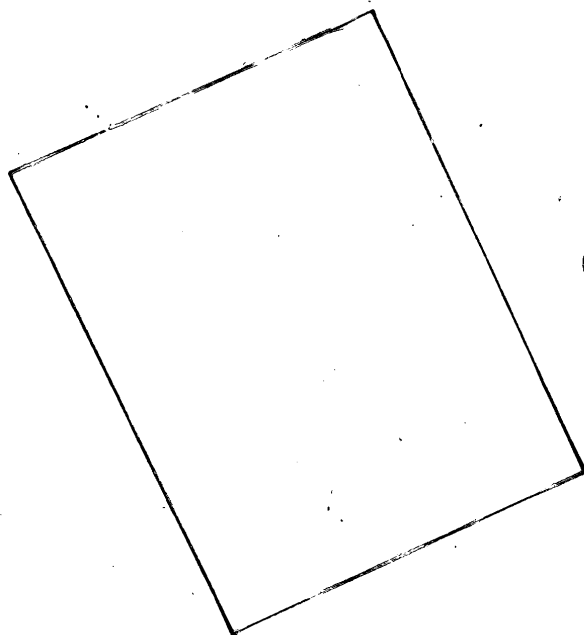


FIGURE 6. TAI-YUAN EXPLOSIVES PLANT

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SEE ALSO  
FIGURE - 7



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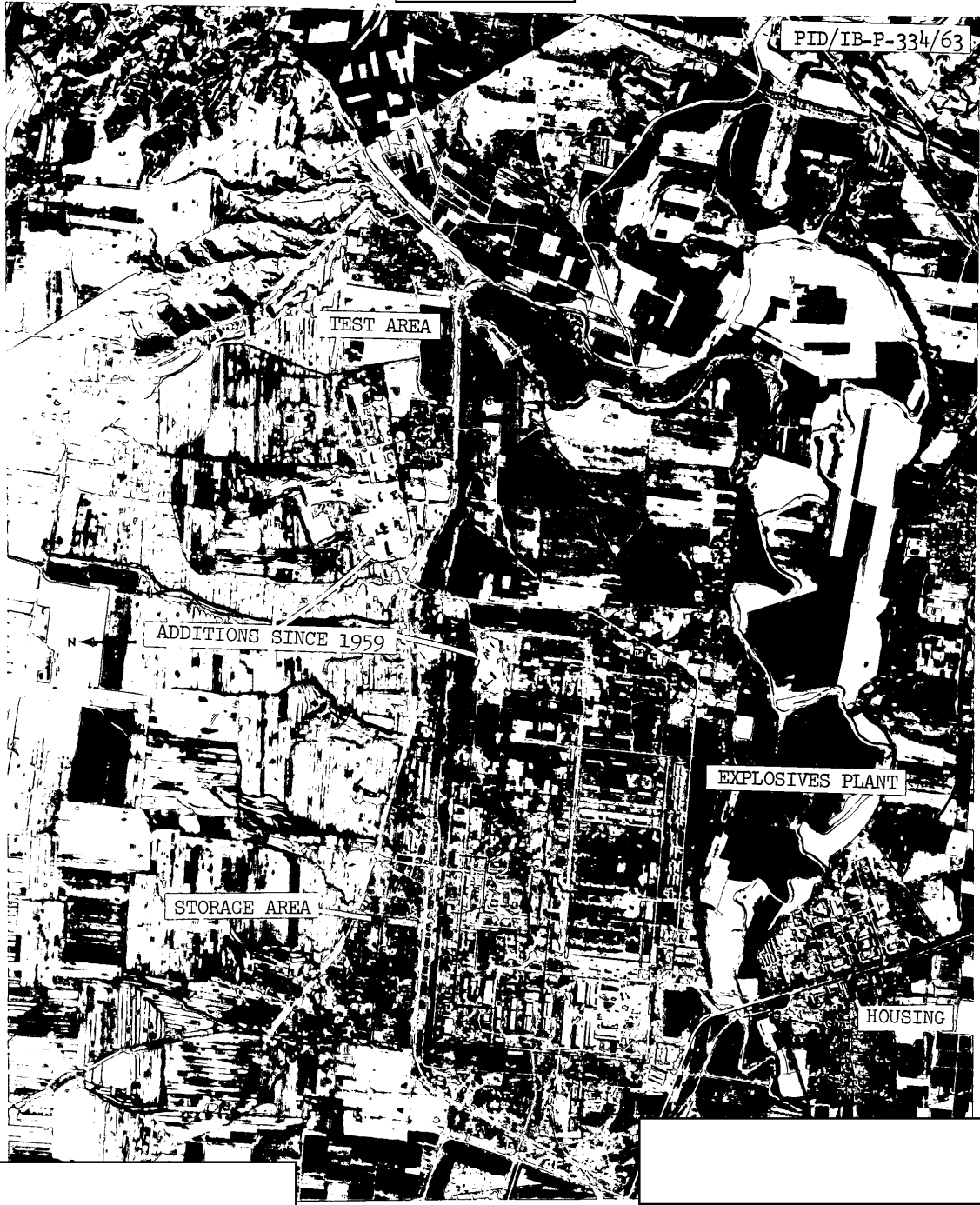


FIGURE 6. TAI-YUAN EXPLOSIVES PLANT

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FIGURE 7. TEST AREA NORTHEAST OF THE TAI-YUAN EXPLOSIVES PLANT (See Also Figure #6)

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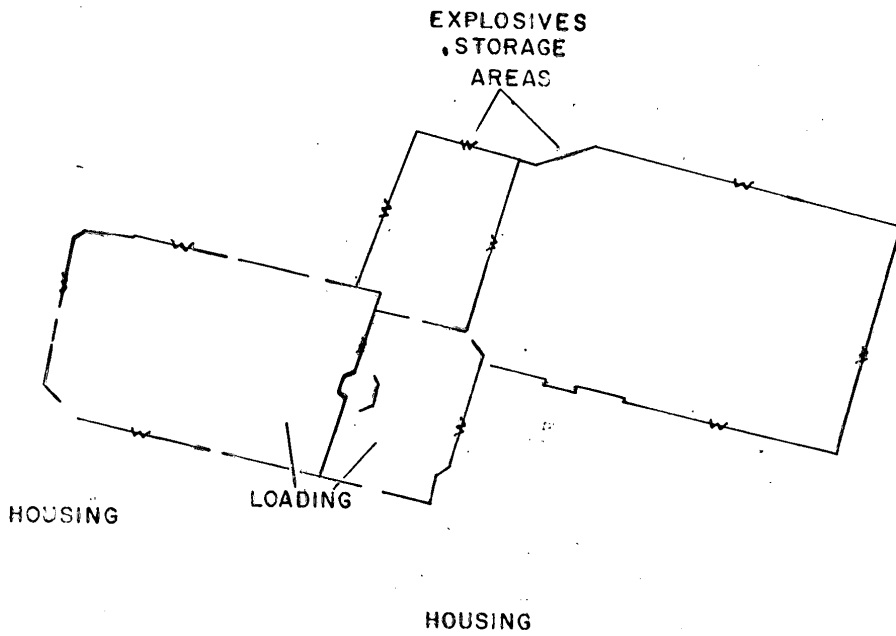
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FIGURE 6. EXPLOSIVES MANUFACTURING PLANT

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FIGURE 8. EXPLOSIVES MANUFACTURING PLANT

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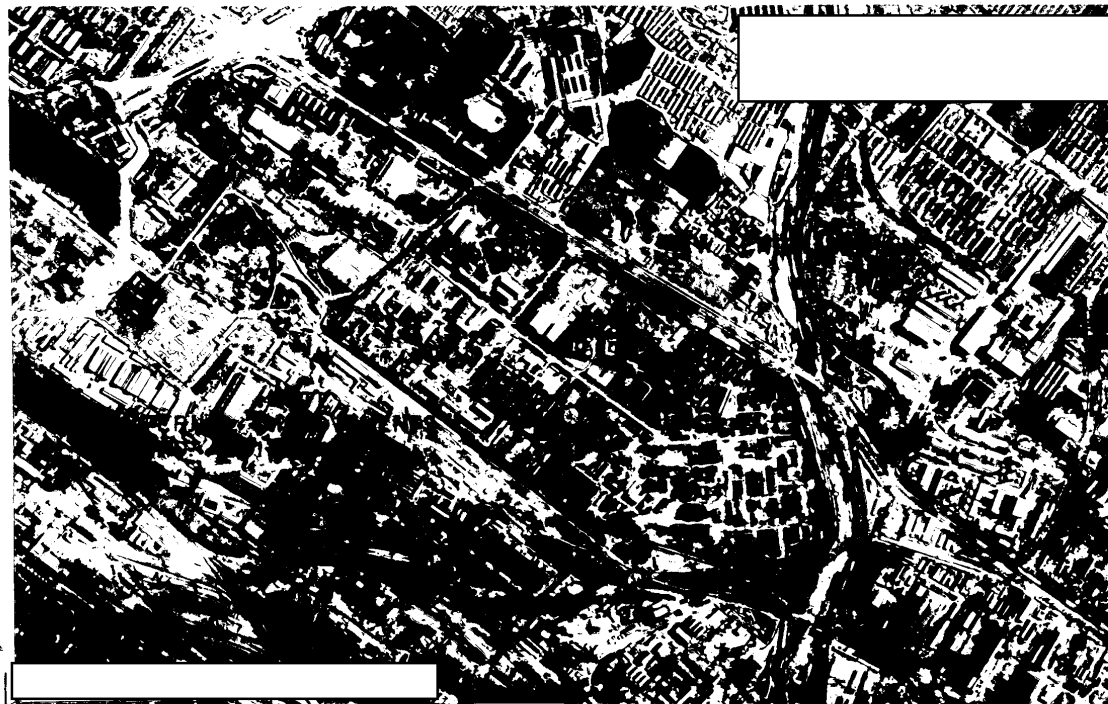
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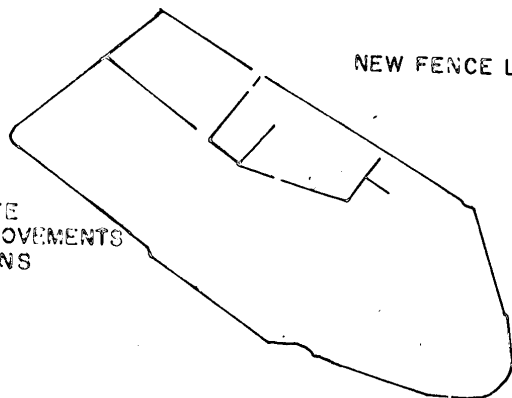
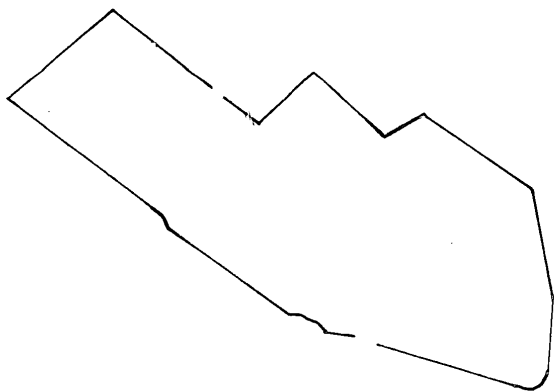
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FIGURE 9. TAI-YUAN EXPLOSIVES PLANT (Also Reported as an Arsenal). Photo Comparison.

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NEW FENCE LINE

NOTE  
INTERNAL IMPROVEMENTS  
AND ADDITIONS

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FIGURE 9. TAI-YUAN EXPLOSIVES PLANT (Also Reported as an Arsenal). Photo Comparison.

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EXPLOSIVES  
MANUFACTURING  
PLANT

TUNNEL

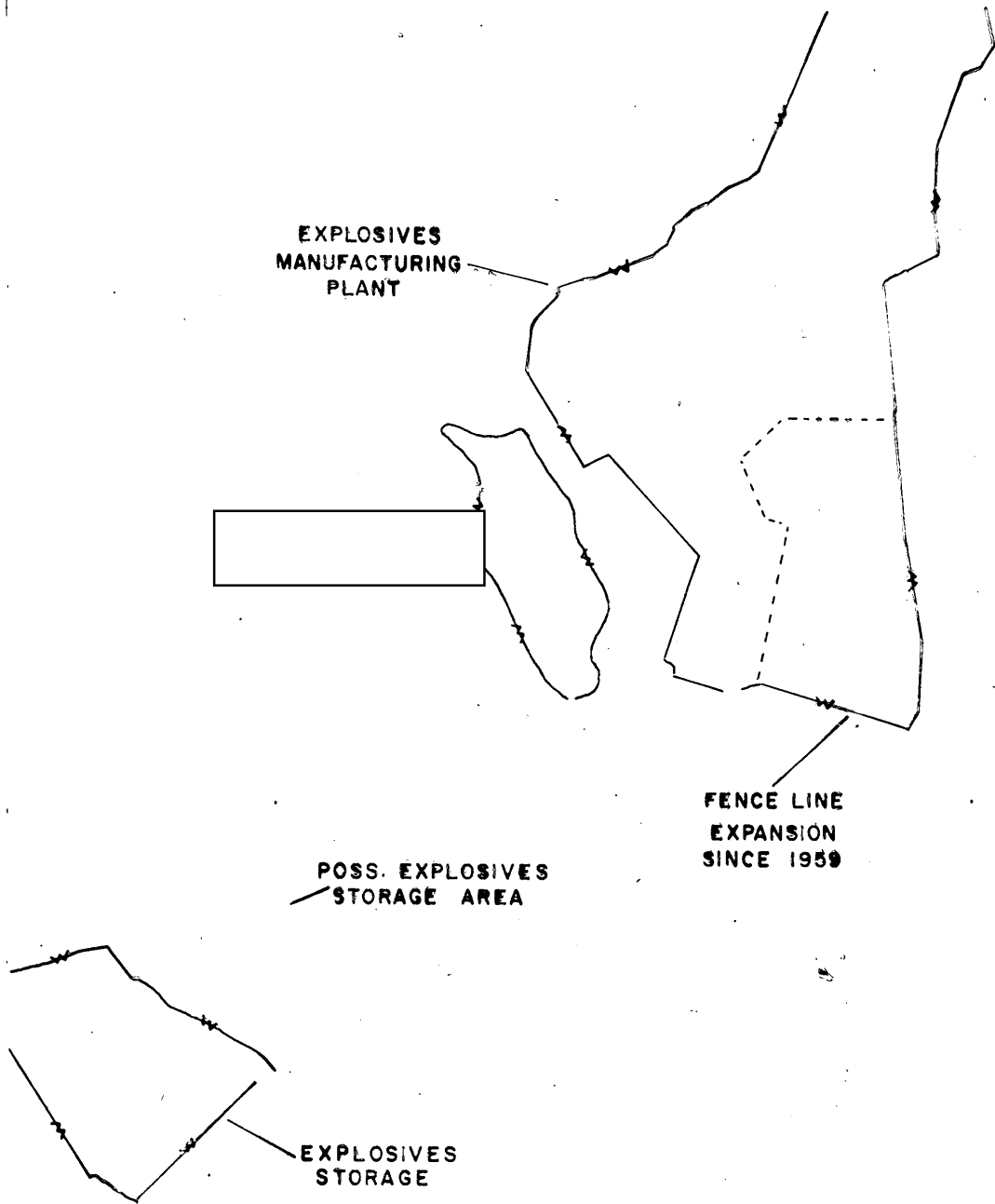
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FIGURE 10. EXPLOSIVES PLANT AND STORAGE AREAS.

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FIGURE 10. EXPLOSIVES PLANT AND STORAGE AREAS.

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FIGURE 11. POSSIBLE ARSENAL

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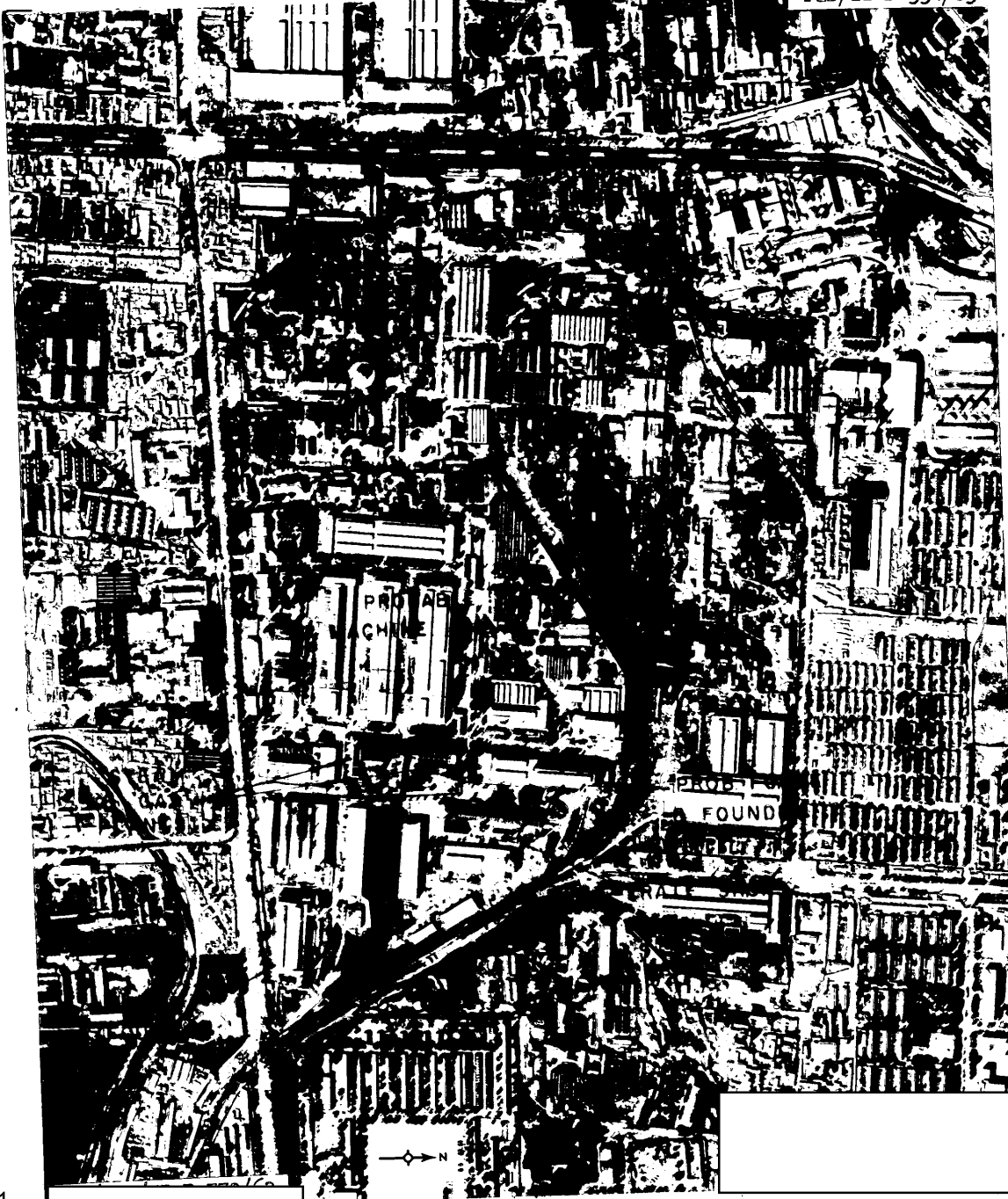
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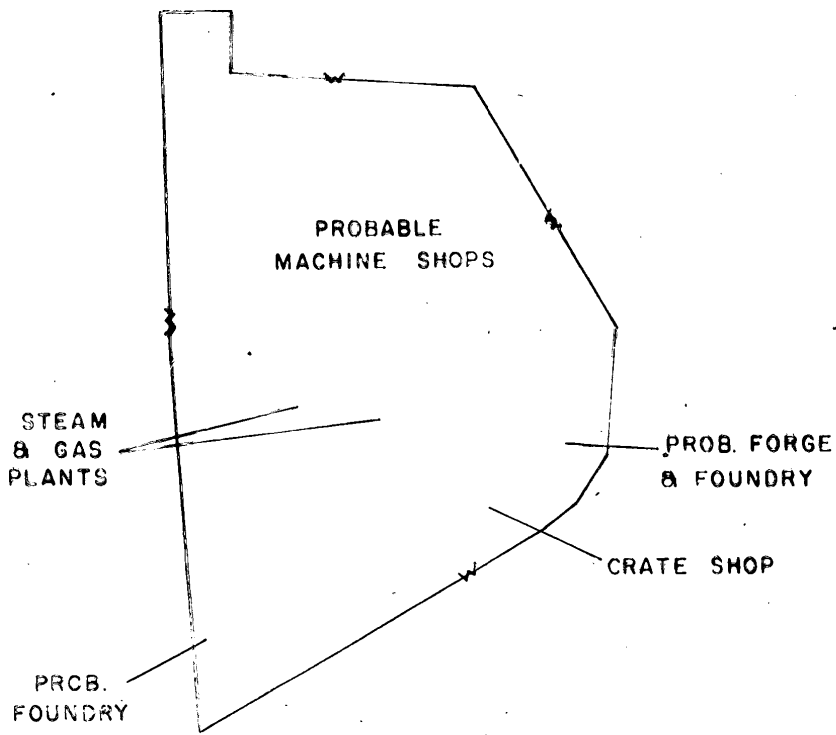
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FIGURE 11. [redacted] ARSENAL

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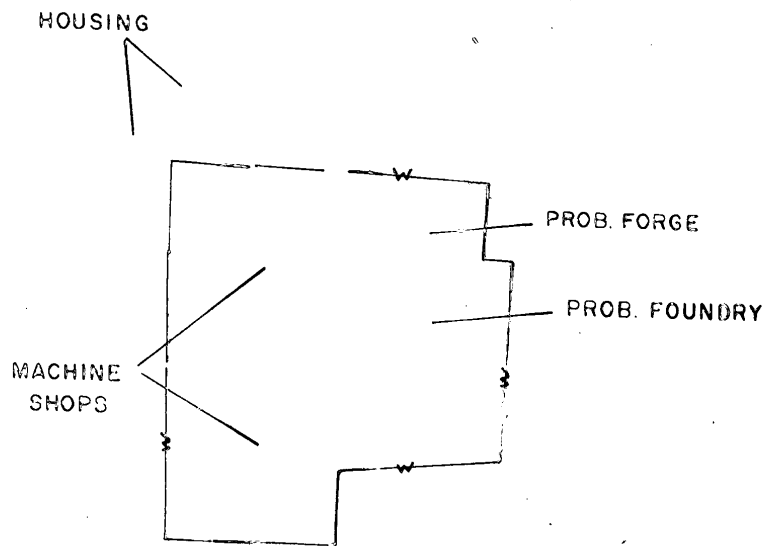
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FIGURE 12. POSSIBLE ARSENAL

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FIGURE 13. PROBABLE AMMUNITION STORAGE AND HANDLING AREAS

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FIGURE 13. PROBABLE AMMUNITION STORAGE AND HANDLING AREAS

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FIGURE 14. PROBABLE AMMUNITION STORAGE AND HANDLING AREAS (See Also Figure #13)

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