Top Secret

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BASIC
IMAGERY
INTERPRETATION
REPORT

NATIONAL PHOTOGRAPHIC
INTERPRETATION CENTER

IRKUTSK AIRFRAME PLANT 39 (S)

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STRATEGIC WEAPONS INDUSTRIAL FACILITIES
USSR
APRIL 1979

Top Secret

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RCA-09/0050/78

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INSTALLATION OR ACTIVITY NAME					COUNTRY
Irkutsk Airframe Plant 39					UR
UTM COORDINATES	GEOGRAPHIC COORDINATES	CATEGORY	BE NO.	COMIREX NO.	NIETB NO.
NA	52-21-31N 104-12-16E				

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MAP REFERENCE

PACAF. USATC, Series 200, Sheet 0200-22, scale 1:200,000

LATEST IMAGERY USED	NEGATION DATE (If required)
	NA

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ABSTRACT

1. (TSRZU) Irkutsk Airframe Plant 39 is in the Trans-Baikal Military District of the USSR, 9.8 kilometers (km) northwest of the center of the city of Irkutsk and approximately 178 km northeast of the nearest point on the Soviet-Mongolian border. At present, Plant 39 is involved in the production of the trainer (FLOGGER C) and the ground attack (FLOGGER D/F) variants of the FLOGGER fighter, as well as component parts for the BACKFIRE bomber. The plant contains 111 buildings (not including minor support buildings) and of floorspace. Another of floorspace are under construction.

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2. (TSR) This report includes a description of Irkutsk Airframe Plant 39 and its collocated test and flyaway field, Irkutsk Northwest Airfield. A brief history of the plant and a discussion of its production activity since its initial imaging on KEYHOLE photography of (Mission 9044) are also included.

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3. (TSR) This report includes a location map, eight annotated photographs, and two tables, one of mensural and chronological data, and one of production data. The information cutoff date for this report is The information contained in this report satisfies the basic reporting requirement for this target.

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INTRODUCTION

4. (S/WNINTEL) Irkutsk Airframe Plant 39 is in an industrial area along the Angara River (Figures 1 and 2). It is 2.0 km south of the nearest point of the river, 9.8 km northwest of the

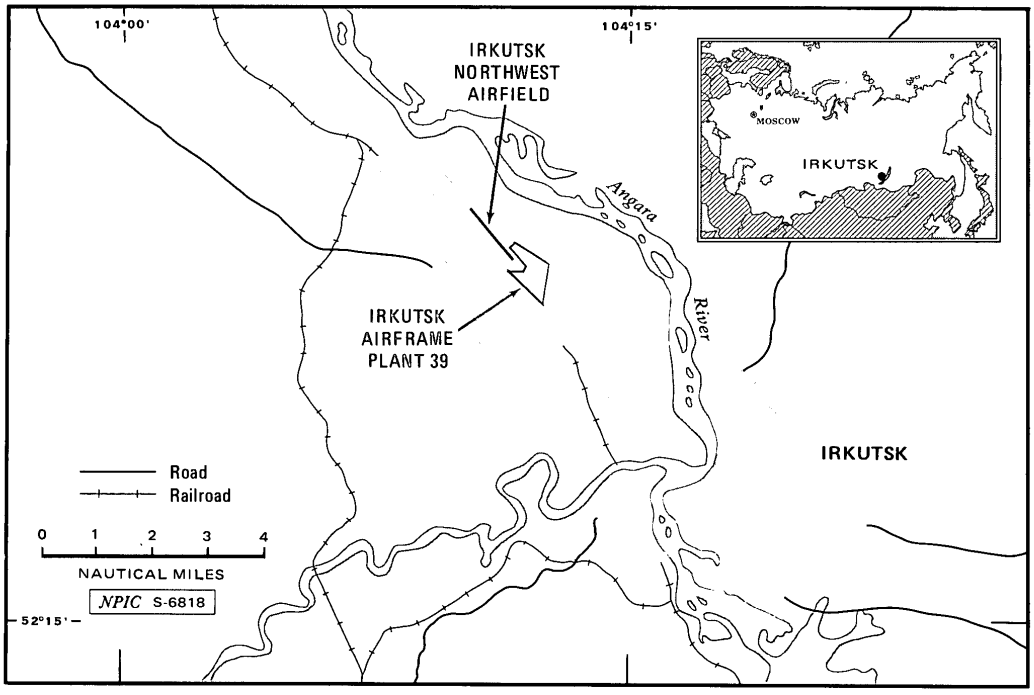

FIGURE 1. LOCATION OF IRKUTSK AIRFRAME PLANT 39, USSR

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center of the city of Irkutsk, and approximately 178 km northeast of the nearest point on the Mongolian border. Irkutsk Northwest Airfield ([redacted] is collocated with the plant and serves as its test and flyaway field (Figures 2 and 3). 25X1

5. (TSR) There has been little recent construction at Plant 39. Since the plant was first imaged on large-scale satellite photography in 1966, only [redacted] of floorspace have been completed. 25X1

BASIC DESCRIPTION

Plant History

6. (S/WNINTEL) Irkutsk Airframe Plant 39 was originally known as Irkutsk Aircraft Plant Stalin 125 when construction began in mid-1932. Construction was completed by mid-1934 and aircraft have been produced at the plant ever since. The plant was expanded in December 1941 when the evacuated Aircraft Plant 39 from Moscow was added. During World War II the Plant received awards for its output.[1]

7. (S) Since the end of World War II, Plant 39 has been involved in several aircraft fabrication programs. In succession, the BAT (TU-2), BOSUN (TU-14), BEAGLE (IL-28), and CUB (AN-12) were produced at the plant. In 1960, the plant began production of the BREWER/MAESTRO (YAK-28/28U). COKE (AN-24) and FLOGGER (MiG-23/27) have also been produced at the plant.[2]

Construction

8. (TSR) Irkutsk Airframe Plant 39 was first observed on satellite imagery of poor interpretability in August 1962. Plant 39 has undergone little change since 1962, and its basic configuration remains the same. The plant covers 118.5 hectares of land and is road, rail, and air served. The plant is dominated by its only assembly/final assembly building (Figure 3 and Table 1, item 97). Sections a and b of item 97 were already complete when the plant was observed in 1962, but only eight bays of section c and none of section d had been completed. Two more bays in section c had been completed by [redacted] The remaining three bays in section c and all of section d had been completed by [redacted] (Dotted lines on Figure 3 indicate portions of section c which were completed by dates specified in the "Remarks" section of Table 1). The construction status of only two other buildings—the final checkout hangar (item 43) and the maintenance building (item 49)—could be confirmed on the imagery of [redacted] Both buildings were complete by that date. Other buildings were probably complete by August 1962, but the image interpretability precluded a determination of their status. 25X1 25X1 25X1

9. (TSR) With the receipt of the first [redacted] the construction status of the remaining buildings was determined. On Figure 3, those buildings and sections of buildings which were confirmed as complete by [redacted] are outlined in black. Buildings and sections of buildings which have been completed since that time are outlined in red. 25X1 25X1

10. (TSR) A new final checkout hangar (item 50) in the late stage of construction was the only major building project still in progress at Plant 39 as of [redacted] The hangar bay section is much larger than either hangar bay of the older final checkout hangar (item 43). The new hangar is [redacted] and contains [redacted] square meters of floorspace, while the sections of the old building are [redacted] and contain [redacted] of floorspace, respectively. In addition, two nearby associated personnel shelters (items 50d and e) adjoining the new hangar are also in the late stage of construction. 25X1 25X1 25X1 25X1

Irkutsk Northwest Airfield

11. (S/WNINTEL) Irkutsk Northwest Airfield is the test and flyaway field for Plant 39. The airfield is immediately adjacent to the northwestern boundary of the plant (Figure 2). The reference point (RP) is the middle of the concrete runway.

12. (TSR) The airfield (Figure 4) has a single serviceable concrete runway with overall dimensions of 2,513 by 70 meters. The runway is oriented on a northwest/southeast ([redacted] degree) azimuth. The concrete runway is paralleled by a sod runway which is approximately 2,084 meters long. 25X1

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Table 1.

Irkutsk Airframe Plant 39, USSR
(Keyed to Figure 3)

This table in its entirety is classified TOP SECRET RUFF

Item	Description	Dimensions (m) L	W	H	Floorspace (sq m)	Date Observed Complete	Remarks
1	Storage bldg						
2	Storage bldg						
3	Storage bldg						
4	Storage bldg						
5	Storage bldg						
6	Storage bldg						
a	New sec						
b	Old sec						
7	Storage bldg						
8	Support bldg						
9	Transshipment bldg/ warehouse						
10	Carpentry shop						
11	Support bldg						
12	Support bldg						
13	Wood treatment bldg						
14	Support bldg						
15	Storage bldg						
16	Storage bldg						
17	Storage bldg						
18	Storage bldg						
19	Support bldg						
20	Support bldg						
21	Storage bldg						
22	Storage bldg						
23	Storage bldg						
24	Support bldg						
25	Prob forge						
26	Storage bldg						
27	Subassembly bldg						
28	Support bldg						
29	Warehouse						
30	Storage bldg						
31	Warehouse						
32	Warehouse						
33	Warehouse						
34	Storage bldg						
35	Support bldg						
36	Storage bldg						Quonset type
37	Storage bldg						
38	Warehouse						
39	Storage bldg						
40	Shop bldg						
41	Support bldg						
42	Support bldg						
43	Final checkout hangar						
a	Hangar sec						
b	Admin/engr sec						4 stories
c	Hangar sec						
d	Admin/engr sec						3 stories
44	Cooling tower						6 units
45	Storage bldg						
46	Storage bldg						Quonset type
47	Storage bldg						Quonset type
48	Storage bldg						
49	Maintenance bldg						
50	Final checkout hangar						Ucon
a	Admin sec						
b	Hangar sec						
c	Admin sec						
d	Personnel shelter						
e	Personnel shelter						
51	Support bldg						
52	Storage bldg						
53	Storage tank						At least cu m capacity
54	Storage tank						At least cu m capacity
55	Storage tank						At least cu m capacity
56	Small vertical prob pressure tanks (19)						
57	Storage bldg						Quonset type
58	Admin/storage bldg						
a	Storage sec						
b	Admin sec						2 stories
c	Storage sec						
59	Storage bldg						
60	Support bldg						
61	Support bldg						
62	Powerplant						
63	Support bldg						
64	Warehouse						
65	Storage bldg						
66	Shop bldg						
a	Shop sec						
b	Shop sec						
c	Admin/engr sec						
d	Shop sec						
67	Support bldg						
68	Support bldg						
69	Support bldg						
70	Support bldg						
71	Support bldg						
72	Shop bldg						
a	Shop sec						
b	Shop sec						
c	Shop sec						
d	Shop sec						
e	Admin/engr sec						3 stories
73	Shop bldg						
74	Support bldg						
75	Support bldg						
76	Support bldg						
77	Support bldg						Quonset type
78	Support bldg						
79	Shop bldg						
80	Storage tanks (2)						
81	Storage tank						
82	Shop bldg						
83	Support bldg						
84	Support bldg						
85	Support bldg						
88	Subassembly/engr bldg						
a	Subassembly sec						
b	Engr sec						
87	Support bldg						
88	Support bldg						
89	Support bldg						
90	Support bldg						
91	Powerplant						
92	Support bldg						
93	Storage bldg						
94	Storage bldg						
95	Support bldg						
96	Shop bldg						
97	Assembly/final assembly bldg						total floorspace
a	Final assembly sec						
b	Shop/sub-assembly sec						
c	Assembly sec						8 bays completed by 2 more by the last 3 by
d	Admin/engr sec						
98	Shop bldg						
99	Shop bldg						
100	Security bldg						
101	Shop bldg						
102	Support bldg						
103	Admin bldg						
104	Support bldg						
105	Storage bldg						
a	Sec 1						Quonset-type section
b	Sec 2						
106	Support bldg						
107	Shop bldg						
a	Admin sec						2 stories
b	Shop sec						
108	Support bldg						
109	Support bldg						
110	Storage bldg						
111	Shop bldg						
a	Sec 1						
b	Sec 2						

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13. (S/WNINTEL) The airfield is serviced by two short taxiways from the plant. Both extend to the plant production-associated parking apron at the airfield, one from the parking apron outside the assembly/final assembly building (Figure 3, item 97) and the other from the two bays of the old final checkout hangar (item 43). The plant production-associated parking apron serves not only as a parking facility for new aircraft but also as a short parallel taxiway for the airfield. The apron is connected to the main concrete runway by an end connecting link and a crossover link. The other parking area at the airfield is associated with the plant but does not support production aircraft. Instead, it supports transport aircraft that are probably related to logistics.

14. (TSR) Navigational aids at the airfield are an air-warning (AW) radar site, a ground-controlled approach (GCA) radar site, a short-range navigation radar site, an electronics site, threshold lights, and an inner marker beacon.

15. (TSR) Arresting wires are at the southeast end of the concrete runway. A POL storage area and a weapons/electronics test and calibration facility (Figure 5) are also at the airfield.

Production

16. (TSRZU) Since August 1962, three aircraft fabrication programs have taken place at this plant: BREWER/MAESTRO (YAK-28/YAK-28U), COKE (AN-24), and FLOGGER (MiG-23/27). Plant 39 is also involved in the production of BACKFIRE wing components.[3,4]

17. (TSRZU) BREWER/MAESTRO production began in 1960 and continued until 1973.[5] The highest number of BREWER observed at Plant 39 was 19 on imagery of 25X1
BREWER continued to be seen through the first quarter of 1973 (25X1
During the production life of the BREWER, a mean count of 5.6 BREWER were present on imagery of Plant 39. BREWER have been seen at the plant since 1973; however, the small numbers, usually only a single aircraft, indicate that they have been present for plant-level maintenance or retrofit rather than as part of a production program. BREWER were last seen at the plant on imagery of 25X1

18. (TSR) COKE production at Plant 39 began in 1966 and probably continued through the third quarter of 1971. During this period, newly produced COKE were usually parked on the plant production-associated aircraft parking apron. No COKE have been observed parked on this apron since COKE have been seen at Plant 39 since that time, but 25X1
they were only in the logistics-associated parking area.

FLOGGER Production

19. (TSR) FLOGGER (MiG 23/27) were first observed at Plant 39 on 25X1
Since that time three models have been observed: FLOGGER A (MiG-23), FLOGGER C 25X1
(MiG-23), and FLOGGER D/F (MiG-27).

20. (TSR) FLOGGER A were observed twice at this plant, on imagery of 25X1
On the first occasion, only one FLOGGER 25X1
could be identified. On the second coverage, however, nine aircraft were present. Image interpretability precluded positive identification of FLOGGER A on other imagery acquired within the same timeframe as the two coverages cited above.

21. (TSR) FLOGGER C (Figure 6) were first observed at Plant 39 on imagery of 25X1
and have been identified, image interpretability permitting, on later coverages, most 25X1
recently on imagery of 25X1

22. (TSR) FLOGGER D/F (Figure 7) were first observed on imagery of and 25X1
have also been identified on later coverages, most recently on imagery of 25X1
Image interpretability has not permitted differentiating the FLOGGER D from the FLOGGER F.

23. (TSR) Since FLOGGER were first identified at the plant, the numbers observed gradually increased to a high count of 56 on . Throughout the remainder 25X1
of 1973, the mean count of FLOGGER observed at Plant 39 was 12. This decline, and the continued low count of FLOGGER observed through mid-1977 (Table 2) suggests two possibilities—a slowdown in the production rate of FLOGGER at this plant during that period, or an accumulation of FLOGGER to unusually high levels from 1971 through March 1973.

24. (TSR) While the mean count of FLOGGER observed at Plant 39 in 1977 was 7.2 aircraft, dividing the year into two six-month periods revealed that the mean number of FLOGGER observed on coverages in the first half of the year was 3.8. Observations during the second half of the year increased to a mean count of 10.2.

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Table 2.
FLOGGER Aircraft Observed at Irkutsk Airframe Plant 39

This table in its entirety is classified TOP SECRET RUFF

Year	Mean Number Observed	Standard Deviation*	High Count	Low Count	Usable Coverages	Remarks
1971	3.3	3.6	9	0	9	First identification of FLOGGER [redacted] FLOGGER A [redacted] and FLOGGER C [redacted] 225X1
1972	35.0	12.9	52	21	5	
1973	31.75	23.2	56	10	4	Highest count ever on [redacted] 25X1 number declined to 14 by next coverage [redacted] 25X1
1974	6.5	5.7	19	1	11	First identification of FLOGGER D/F on [redacted] 25X1
1975	11.0	6.8	23	3	6	
1976	10.25	3.4	14	6	4	
1977	7.2	5.5	25	1	19	High count seen on [redacted] 25X1 imagery; second highest count [redacted] 25X1
1978	18.7	6.5	31	7	32	[redacted] imagery showed highest count since [redacted] 25X1 25X1

*Applies to mean numbers observed.

25. (TSR) The mean number of FLOGGER observed at Plant 39 continued to increase during 1978, slowly during the first half of the year (with a mean of 11.5), and more rapidly during the last half of the year (with a mean of 21.3). On the last coverage available for this report, 5 December 1978, 31 FLOGGER were observed at the plant, the highest count since the high count observed in March 1973. If this increase in the number of FLOGGER observed and/or produced continues, it could explain the need for the new final checkout hangar (item 50, Figure 3).

BACKFIRE Component Production

26. (TSRZU) Irkutsk Airframe Plant 39 is probably involved in the production of components for the BACKFIRE bomber. Although there has been no photographically derived confirmation of this, information obtained from other sources[3,4] suggests that this is the case. Information derived from intercepted communications between Plant 39 and Kazan Airframe Plant Gorbunov 22 [redacted] the BACKFIRE production facility, in March and April 1977 indicated that BACKFIRE wing bolts were produced at Plant 39.[4] Fuel system components for the BACKFIRE were also produced at Plant 39, which may be a subcontractor for the wings of the BACKFIRE version 45.03[5] (BACKFIRE B). 25X1

COCK Activity at Plant 39

27. (TSR) COCK aircraft have been observed at Plant 39 and the flyaway airfield several times (Figures 7 and 8), beginning with imagery of [redacted]. The COCK were probably involved with the shipment of FLOGGER aircraft. On one occasion, in February 1977 (Figure 8), two FLOGGER without wings were observed awaiting loading immediately behind a COCK. Transport aircraft at Plant 39 are usually observed in the logistics-associated aircraft parking area. COCK aircraft, however, have always been parked on the opposite side of the flyaway field. This, along with the observed loading activity, indicates that COCK are probably present for the purpose of airlifting FLOGGER aircraft. 25X1

FOXBAT B/D with Unidentified Stores

28. (TSR) On [redacted] a FOXBAT B/D aircraft was observed at Irkutsk Plant 39 (Figure 9). This was the first sighting of a FOXBAT B/D at this plant. The sighting of the FOXBAT B/D was unusual not only because it was at this plant but also because unidentified stores were mounted on the aircraft, one under each wing. FOXBAT B and D are reconnaissance versions of FOXBAT; it is highly unusual to see them with stores mounted under their wings. The nature and use of the stores could not be determined. The FOXBAT B/D was present on two subsequent coverages, [redacted], but it has not been seen since. The September 1977 sighting at Irkutsk Plant 39 was only the second time that a FOXBAT B/D has been identified with mounted, unidentified stores. The only previous sighting was at Gorkiy Airframe Plant Ordzhonikidze 21 [redacted] Plant 21 is the manufacturer of FOXBAT aircraft. 25X1 25X1 25X1

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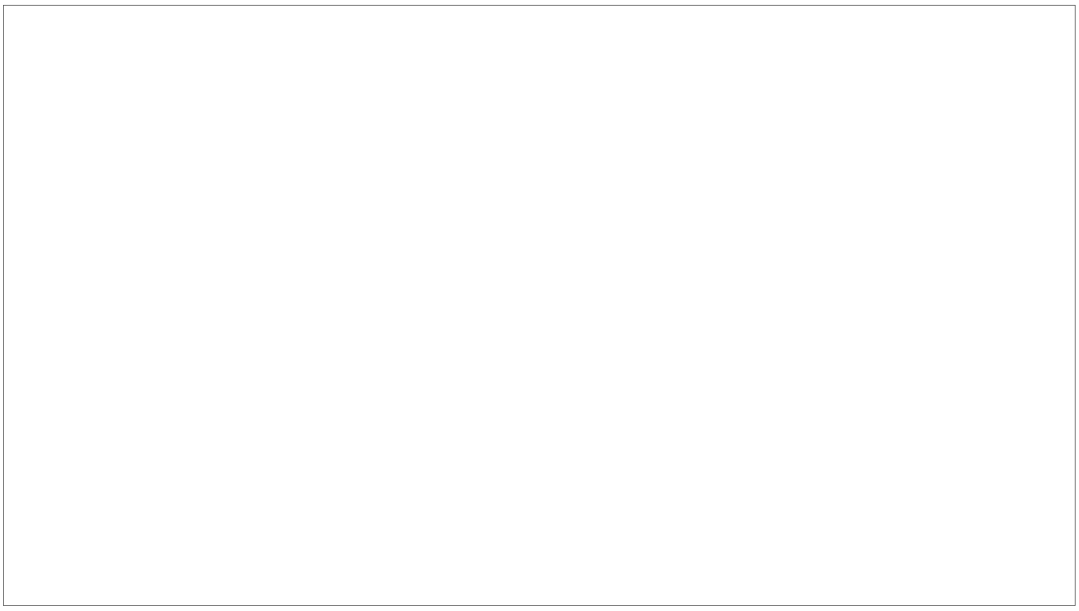

REFERENCES

IMAGERY

(TSR) All applicable imagery of suitable interpretability through [redacted] was used in the preparation of this report. 25X1

MAPS OR CHARTS

PACAF. US Air Target Chart, Series 200, Sheet 0200-22, scale 1:200,000 (UNCLASSIFIED)

DMAAC. Operation Navigation Chart, Series ONC, Sheet E-7, scale 1:100,000 (UNCLASSIFIED)

DOCUMENTS

1. USAF/AFCIN. Air Intelligence Information Report 1255840, *Irkutsk Aircraft Plant*, 29 May 59 (UNCLASSIFIED)

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3. NSA. K/00/5693-77, *Aircraft Plant 39, Irkutsk, Produces BACKFIRE Bomber Components*, 011653Z Jun 77 (TOP SECRET [redacted] 25X1
4. NSA. K/00/3443-78, *Wings for BACKFIRE Bomber Probably to be Produced at Plant 39, Irkutsk*, 181456Z Apr 78 (TOP SECRET [redacted] 25X1
5. DIA. DDB-1923-2-78-SAO, *Foreign Aircraft Production (FOAP), Communist World (U)*, May 78 (TOP SECRET [redacted] 25X1

[redacted] 25X1

[redacted] 25X1

REQUIREMENT

COMIREX J02

Project 280018DJ

(S) Comments and queries regarding this report are welcome. They may be directed to [redacted] Warsaw Pact Forces Division, Imagery Exploitation Group, NPIC, [redacted] 25X1 25X1