[redacted] PROJECT 10073 RECORD CARD

ATIC NO. - - -

AP NO. - - -

REPORT NO. - - -

DATE OF REPORT - - -

TIME OF SIGHTING - - -

NAME - - -

SITE - - -

COUNTY - - -

NO. IN GROUP - - -

WORLD - - -

PHOTOS - - - SKETCHES - - -

DATE OF INFO 1950

LOCATION Great Falls, Mont.

SOURCE Civilian

DATE IN TO ATIC - - -

COLOR - - -

SPEED - - - Estimated
Measured

ALTITUDE - - - Estimated
Measured

LENGTH OF TIME OBSERVED - - -

TYPE OF OBSERVATION - - -

MANEUVERS - - -

REMARKS: This is a report on some pictures taken of "flying saucers" conclusion reached was that the pictures probably were [redacted]

Temporary ATIC Form 329
(2 Jan 52)

See Also: Film 7-3745-347

[redacted]

THE [redacted] CASE

5 or 15 Aug 1950

Two Unidentified Flying Objects (UFO's) were sighted and photographed at about 11:30 MST on August 15, 1950 by [redacted] at Great Falls, Montana. Mr. [redacted] owns and operates a radio station in Missoula, Montana, and is the owner of the Great Falls baseball team. It was during an inspection of this ball park that the sighting took place. [redacted] (and his secretary, also present at the time) first noticed the UFO's as silvery objects to the NW, accidentally when looking to tell the wind by the smoke from the Anaconda Copper Company smokestack nearby. The UFO's drew his attention to the extent that he ran 60 feet from the grandstand to the parking lot, got his motion picture camera (Revere turret type 16mm) out of his car and began tracking the UFO's which appeared to him to have stopped in mid-air, remained stationary for a while and then, with a swooshing sound floated away to the left (SW keeping about the same distance from each other until they were lost from sight.

The color film (Daylight Kodachrome) was submitted to the Air Force. It was studied and analyzed by the Air Force and the U.S. Navy.

The original Air Force conclusion, based on the interrogation of witnesses and the evaluation of the data, was that the UFOs were, in all probability, two Air Force F-94 fighter aircraft known to be in the vicinity at the time.

THE [redacted] CASE

5 or 15 Aug 1950

Simulated photographs of aircraft at various distances, made by an aircraft research firm in a recent independent and unsolicited analysis of the [redacted] films, show striking similarity to the two white blops in this film.

Based on the degree of credibility accorded this early ATIC evaluation and the strong corroborative evidence supplied by the recent independent analysis, the Air Force has no compelling reason to alter its original conclusion.

[redacted] Montana Case: *In 1950, after an ATIC interrogation of witnesses and evaluation of data, and our opinion at that was that the UFO's apparently were two F-94 aircraft. In support of this contention, a few weeks ago an extremely able and very detailed analysis was made by a private laboratory of the film strip in question. Their conclusions, in part, were that," photographs of the UFO's indicate t that airplane reflections might possibly look like the images shown on the film. The fact that the images do fade is reminiscent of airplane reflective phenomena" . Also strong corroborative evidence is given by simulated photographs of aircraft at various distances made by this laboratory which show that aircraft can look similar to the two white blops shown on the Montana films. There is,therefore, no compelling reason to alter our original evaluation

* JHA

George T. Gregory, Capt. USAF
25 May 1954

Recommendation by Mr. Acree and phone to
HQs USAF - 31 May 54

ATIC

DAYTON DAILY NEWS
OCT 50

Field Denies Saucer Report

Air Materiel Command officials at the Wright-Patterson AFB Thursday denied a report that they had confiscated colored motion pictures of two silver discs flying over a Great Falls, Mont., ball park.

"We do not have any such films here at Air Materiel Command headquarters," a spokesman for the public information office said. He did not elaborate.

The report of the confiscation came from Nick Mariana, manager of the Great Falls baseball team in the Pioneer league.

* * *

MARIANA TOLD the Associated Press that he saw the discs flying over the ball field on Aug. 15, focused his camera and photographed them. He said they appear on the film for about three seconds. The films were turned over to the AMC Mariana reported, on request of a special investigator. He said he was told to release nothing further concerning the film.

The team manager said the discs appeared to be about 10,000 feet high and were in sight for about 15 seconds.

"They were flying out of the north and going southeasterly," he said. "I filmed them until they disappeared from sight. They looked round and silvery and were moving together—not too fast.

"Two jets that flew over in another direction about the same time seemed to be going much faster."

DAYTON DAILY NEWS 6 OCT 50

Washington Interested

"Saucer Film" To A. F.

The Air Materiel Command at Wright-Patterson AFB will get the Great Falls, Mont., flying saucer movies Monday, but in all probability they won't keep them.

Indications are that the color films, taken by Nick Mariana, manager of the Great Falls baseball team, will be sent directly to Air Force headquarters in Washington for scrutiny.

Thursday AMC officials said they had "not" received the films. Friday, however, an intelligence officer from the Great Falls AFB told the Associated Press he had Mariana's films and was sending them to the Wright-Patterson base "today."

The films are expected to arrive in Dayton Monday.

Mariana took the pictures of the two silver discs over his ball park on Aug. 15, then turned them over to an Air Force investigator. He was told, Mariana reported, to say nothing concerning the pictures which show for about three seconds on the film.

At AMC headquarters, Friday, a spokesman said that while the Air Force's "Project Saucer" investigation had been dropped the "Air Force is and will continue to be interested in and continuing to investigate all reports of astronomical phenomena."

Dayton Daily News
10 October 1950

Latest 'Saucer' Story Fails To Hold Water

The nation's latest flying saucer story came a cropper, Tuesday.

Air Materiel Command officials at the Wright-Patterson AFB, after viewing color motion pictures taken last Aug. 15 at a Great Falls, Mont., ball park said the film was too dark to distinguish any recognizeable objects.

The film, which during the past week had become the subject of widespread conjecture, will not be sent on to USAF Intelligence in Washington, but, if he wants it, will be returned to its owner, Nick Mariana, manager of the Great Falls baseball team.

* * *

LAST WEEK Mariana revealed that he had taken the pictures of two silver discs over his ball park, then turned the film over to an Air Force intelligence officer—Capt. John Byrnlasen—of the Great Falls Air Force base.

The Great Falls officer forwarded the films to AMC intelligence officials last Friday. The films arrived at the Wright-Patterson base late Monday evening and were viewed immediately.

After viewing the films the AMC officials issued the following statement:

"The film is too dark to distinguish any recognizeable objects. For this reason it will not be sent on to Washington headquarters. The Air Force has no further interest in the film. The film will be returned to the owner, with thanks for his cooperation, if he wants it back."

7-3712-30

EXTRACT GEORGE FAWCETT LITERATURE

On August 15, baseball park manager, [redacted], captured the saucers on film, with his movies at Great Falls, Montana of two round bright lights in echelon formation, which moved behind a water tower. These objects were made with colored movie films and appeared in the movie entitled"Unidentified Flying Objects", now being shown nationwide on various TV channels.

The project received three other movies that got considerable attention. One, in color, was taken at Great Falls, Mont., and showed two bright spots of light speeding across the sky and passing behind a water tower. Two F-94s were in the area, and the lights could have been reflections of the sun on these jets, but we were not able to come to any definite conclusions.

EXTRACT FROM RUPERT "TRUE" MAGAZINE ARTICLE

ASSOCIATED PRESS
UNITED PRESS
FULL LEASED WIRE REPORTS

NATIONAL REPRESENTATIVE
REYNOLDS-FITZGERALD, INC.
NEW YORK: 515 MADISON AVE.
CHICAGO: 360 NORTH MICHIGAN AVE.
PHILADELPHIA: LAND TITLE BLDG.
DETROIT: 8-260 GENERAL MOTORS BLDG.
SAN FRANCISCO: 58 SUTTER ST.
LOS ANGELES: 117 WEST 9TH ST.
SEATTLE: 610 LEDDY BLDG.

MEMBER AUDIT BUREAU OF CIRCULATIONS

Great Falls Leader

EVENING, EXCEPT SUNDAY
THE LEADER COMPANY, PUBLISHERS

GREAT FALLS, MONTANA

Sept. 13, 1950

Commanding General,
Air Material Command,
Wright-Patterson Air Force Base,
Dayton, O.

ATTENTION ---- Mr. [redacted]

AXA

[redacted], general manager of our [redacted] covered days to see two silvery disk objects darkening about the sky over the base plant.

He doubted his eyes and called his secretary, who saw the same objects.

He ran to his car and got his motion picture camera out of the glove compartment, after unfolding the car.

He took color pictures of the two silver disks flying against a deep blue Montana sky. The films, since developed, have caused some excitement in Great Falls.

Our base port lies between the ACM zinc plant, largest producer in the world, and the Great Falls air force base.

[redacted] took address to [redacted] north, they he will gladly give the films to any government agency which may be interested.

Sincerely,

C. T. Sullivan

C. T. Sullivan
Great Falls Leader
Great Falls, Mont.

15 16

ROUTING

JOINT MESSAGEFORM

COMMUNICATIONS CENTER NO.

SPACE ABOVE FOR COMMUNICATIONS CENTER ONLY

FROM: (*Originator*)

CO ATIC

TO: HQ 29th AIR DIVISION (DEFENSE)
GREAT FALLS AFB MONTANA

INFO: HQ AIR DEFENSE COMMAND ENT AFB
COLORADO SPRINGS COLORADO

DATE-TIME GROUP	SECURITY CLASSIFICATION
302454 Sept 52	

PRECEDENCE FOR:	ACTION	INFORMATION
	Routine	

☐ BOOK MESSAGE ☒ ORIGINAL MESSAGE

☐ MULTIPLE ADDRESS CRYPTOPRECAUTION ☐ YES ☒ NO

REFERS TO MESSAGE:

IDENTIFICATION	CLASSIFICATION

ATIAA-5 File

FROM: AFOIN-ATIAA-9-1-5 FOR DIRECTOR OF INTELLIGENCE

Reference telephone call from Lt Col Velebney, D/I Hq ADC, on 29 August 1952. Black and white negatives of alledged unidentified aerial objects taken by a Mr. [redacted] of Great Falls, Montana, were forwarded Air Mail Special Delivery to Hq 29th AD (Defense) on 30 August 1950. Eight mm color movie film is being processed by Eastman Kodak Company and will be forwarded upon return to ATIC. This should be within 10 days.

SECURITY CLASSIFICATION	PAGE 1 OF 1 PAGES

DRAFTER'S NAME (*and signature, when required*)
Capt E. J. Ruppelt/jos

RELEASING OFFICER'S SIGNATURE

SYMBOL	TELEPHONE	OFFICIAL TITLE
ATIAA-5	65365	ROBERT E. KENNEDY, Major, USAF Air Adjutant General

DD FORM 1 OCT 49 173 REPLACES NME FORM 173, 1 MAY 49, WHICH MAY BE USED.

16—58023-3 ☆ U. S. GOVERNMENT PRINTING OFFICE

SUBJECT: UNCONVENTIONAL AIRCRAFT

1. On 5 October 1950, Mr. [redacted] advised that the camera used by him in the taking of the moving picture film transmitted under separate cover, was a Revere, 16 mm., magazine loading type with an F. 1.9 wide-angle, telephoto lens. Mr. [redacted] stated that the settings used at the time were: shutter opening F.22 and focal setting, infinity. Film make and type was Eastman Kodachrome, daylight type, and speed at which pictures were taken was sixteen frames per second. Mr. [redacted] further advised that in operating the camera intaking the pictures, he had "panned" the camera slowly from right to left.

2. A further check of the records of Base Operations, Great Falls Air Force Base, Great Falls, Montana, indicates that an F-94 type aircraft, #2503, and F-94 type aircraft, #2502, landed at Great Falls Air Force Base at 1133 and 1130 hours (Mountain Standard Time) respectively on 15 August 1950. These aircraft were assigned the 449th Fighter Squadron, Ladd Air Force Base, Alaska. Mr. [redacted] stated that almost immediately after taking the motion pictures, two USAF jet type aircrafthad flown across the sky east of him, heading in a southerly direction.

[redacted]

UNCLASSIFIED

AXA

5D 24-21-70
(6 Oct 50)
SUBJ: UNCONVENTIONAL AIRCRAFT

1st Ind

5D-OSI/JO'C/blk

5th OSI District (IG), Wright-Patterson AFB, Dayton, Ohio, 10 Oct 50

TO: Director of Intelligence, Air Materiel Command, Wright-Patterson AFB, Dayton, Ohio, ATTN: Chief, Technical Analysis Division.

1. Reference is made to a visit to the 5th OSI District (IG) on 26 September 1950 by Mr. RODGERS of the Technical Analysis Division, Intelligence Department, Headquarters, Air Material Command. The attached is forwarded as a matter of interest to your headquarters.

2. Capt BRYNILDSEN of the 15th OSI District, advised this headquarters on 9 October 1950 that Mr. [redacted] had been approached by representatives of Life Magazine, Movietone News and True Magazine all of whom requested subject film.

3. In order that OSI records may be complete, it is requested that you furnish to the undersigned information as to what disposition is made in this matter.

1 Incl
n/c

James F. X. O'Connell

JAMES F. X. O'CONNELL
Lt Colonel, USAF
District Commander

CONTROL NO.	SUBJECT: 1st Ind	DECIMAL FILE NO.	FOLLOW UP ON
P 190	Unconventional Aircraft CONFIDENTIAL		DATE

FROM: 5th OSI District DATED 10-10-50
TO: MCIAXA NO. INCLS 1

RECORDING DESK 3XD-1 DATE RECORDED 10-12-50 HOUR 1100

ROUTED TO	SUSPENSE DATE	ESTABLISHED BY (INITIALS)	DATE
1 MCIAXA	7/2	Jaffe	10 11
2			
3			

DATE OF REPLY | OTHER DISPOSITION:

TRANSMITTAL
RAMC FORM NO. 10-2A
(20 NOV 47)
(FORMERLY AMC 10-2)
SEE OTHER SIDE FOR REMARKS

This was answered by R+R on 10-19-50

DOWNGRADED AT 3 YEAR INTERVALS:
DECLASSIFIED AFTER 12 YEARS.
DOD DIR 5200.10

UNCLASSIFIED

[redacted]

1. Cy INTIAL
3. Ata
3. C. files

ACTION

C157

RC1180

TYB183

TDC168

JEPHQ B145

RR JWPQG JEDWP 222

DE JEPHQ 26A

R 1317Ø8Z ZNJ

FM HQ USAF WASHDC

JWPQG/CO GREATFALLS AFB MONT

INFO JEDWP/CHIEF ATIC WP AFB OHIO

[redacted] FROM AFOIN-2 5ØØ72 ATTN CLN BASE INTELL.

OFFICER. DESIRE TO KNOW IF MR. [redacted] IS STILL A RESIDENT

OF GREAT FALLS AND CMA IF SO CMA HIS ADDRESS CMA TELEPHONE NUMBER

AND PRESENT EMPLOYMENT. INQUIRY MUST BE DISCREET AND PREFERABLY

WITHOUT HIS KNOWLEDGE. FOR YOUR INFO CMA [redacted] OBTAINED ABOUT 15

FEET OF 16 MM KODACROME MOVIES OF 2 UNIDENTIFIED FLYING OBJECTS

OVER GREATFALLS ON 15 AUG 5Ø. AT THE TIME [redacted] RESIDED AT [redacted]

[redacted] GREAT FALLS AND WAS GENERAL MANAGER OF THE

[redacted] AS A SPORTS REPORTER AND COMMENTATOR.

HIS SECRETARY ALSO WITNESSED SIGHTING AND MAY KNOW HIS PRESENT

WHEREABOUTS IF NOT RESIDING LOCALLY. SHE IS MISS [redacted]

THEN RESIDING [redacted] IN GREAT FALLS. IN RESPONSE

REPLY TO AFOIN-2A2.

17/1752Z OCT JEPHQ

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ACTION

1 OCT 10 PM 2:36

AIR DEFENSE / INTELLIGENCE

ATIC

cy #1

100ct

[redacted]

UNC

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS UNITED STATES AIR FORCE
WASHINGTON

AF 237316

THE INSPECTOR GENERAL USAF
15TH DISTRICT OFFICE OF SPECIAL INVESTIGATIONS
GREAT FALLS AIR FORCE BASE, GREAT FALLS, MONTANA

IN REPLY REFER TO: 24-0

6 October 1950

SUBJECT: UNCONVENTIONAL AIRCRAFT.

TO: District Commander
5th District Office of Special Investigations
Wright-Patterson Air Force Base
Dayton, Ohio.

1. Transmitted under separate cover is approximately fifteen feet of moving picture film taken by Mr. [redacted], of 2919 First Avenue North, Great Falls, Montana, who is general manager of the Great Falls Baseball Club.

2. Mr. [redacted] made these pictures on 15 August 1950 between the hours of 11:25 and 11:30 A. M., at Great Falls, Montana. On interview, he stated that he first sighted the objects while standing in the grandstand of the ball park located at 26th Street and Eleventh Avenue North, Great Falls, Montana, and that he saw two bright disc shaped objects proceeding in a southerly direction at an altitude of approximately ten thousand feet and at a distance of about three-quarters of a mile in a westerly direction, from the observer's viewpoint. Mr. [redacted] then stated that he ran downstairs and outside to his car from which he obtained his camera and made the pictures shown in the film. From the time of first sighting to the completion of taking of the pictures, Mr. [redacted] estimated consumed approximately twenty seconds. At the time of his taking the pictures, a Miss [redacted] Great Falls, Montana, who is employed as his secretary, was a witness.

Possibly should be granulite dia.

3. The water tower in instant pictures is located approximately seven hundred feet in a southwesterly direction from the point at which Mr. Muriana stood when taking the pictures and the tower is approximately one hundred seventy-five feet in height.

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DOD DIR 5200.10

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[redacted]

15-5025

UNCLASS...

24-O
SUBJECT: UNCONVENTIONAL AIRCRAFT.

6 October 1950

4. With reference to background information as regards [redacted], he is a graduate of Montana State University, 1938, with a BA in journalism. He was born in Miles City, Montana, in 1912, went to Montana State University in 1935 and has, since graduation from that school, resided in Helena from 1940 to 1941 and from 1941 until the present at Great Falls. During the war, Mr. [redacted] served in the Army Air Forces from June 1943 to October 1945, attaining the rank of Corporal and was editor of a newspaper, [redacted] at Great Falls Air Force Base, at Great Falls, Montana. Subject has been married for a period of ten years and has one child, a daughter, three years of age. Presently Mr. [redacted] is employed as general manager of the [redacted], Great Falls, Montana, and also as a radio sports commentator and radio announcer of sporting events. He enjoys an excellent reputation in the local community and is regarded as a reliable, trustworthy and honest individual.

5. Prior to concluding the interview with Mr. Mariana, he was advised that the film was being forwarded to the Air Materiel Command because of that agency's interest in anything which would contribute to its fund of technical intelligence data.

1 Incl.
Summary of Information
per provisions of Air
Intelligence Requirements
Memo No. 4.

JOHN P. BRYNILDSEN
Captain, USAF
District Commander

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CONFIDENTIAL

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS UNITED STATES AIR FORCE
WASHINGTON

UNCLASSIFIED

THE INSPECTOR GENERAL USAF
15TH DISTRICT OFFICE OF SPECIAL INVESTIGATIONS
GREAT FALLS AIR FORCE BASE, GREAT FALLS, MONTANA

IN REPLY REFER TO: 24-0

6 October 1950

MEMORANDUM FOR: District Commander, 5th District Office of Special Investigations, Wright-Patterson Air Force Base, Dayton, Ohio.

SUBJECT: UNCONVENTIONAL AIRCRAFT

1. On 5 October 1950, Mr. [redacted] advised that the camera used by him in the taking of the moving picture film transmitted under separate cover, was a Revere, 16 mm., magazine loading type with an F. 1.9 wide-angle, telephoto lens. Mr. [redacted] stated that the settings used at the time were: shutter opening F.22 and focal setting, infinity. Film make and type was Eastman Kodachrome, daylight type, and speed at which pictures were taken was sixteen frames per second. Mr. [redacted] further advised that in operating the camera in taking the pictures, he had "panned" the camera slowly from right to left.

2. A further check of the records of Base Operations, Great Falls Air Force Base, Great Falls, Montana, indicates that an F-94 type aircraft, #2503, and an F-94 type aircraft, #2502, landed at Great Falls Air Force Base at 1133 and 1130 hours (Mountain Standard Time) respectively on 15 August 1950. These aircraft were assigned the 449th Fighter Squadron, Ladd Air Force Base, Alaska. Mr. [redacted] stated that almost immediately after taking the motion pictures, ~~two USAF jet type aircraft had flown across the sky east of him, heading in a southerly direction.~~

Probably at

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PART II

1. 15 August 1950
2. Between 1125 and 1130 Mount[redacted]in Standard Time
3. a. [redacted], Great Falls, Montana
4. Two objects, entrail, approximately fifty yards apart.
5. The U. S. Weather Bureau, Gore Field, Great Falls, Montana, which keeps a record of the observable celestial phenomena or planets reports that there were no such phenomena observable on 15 August 1950.
6. Distance of objects from observer:
   a. Approximately three-quarters of a mile laterally in a westerly direction.
   b. The angle of elevation from the horizon was about thirty-five degrees.
   c. The altitude was approximately ten thousand feet.
7. Mr. [redacted]states object was in sight to him a total of about twenty seconds and about seven seconds to his secretary, Miss [redacted].
8. Mr. Mariana states that the appearance of the object was:
   a. Of a bright clean aluminum surface.
   b. Disc shape--apparently had depth
   c. Objects appeared to be of metal material
   d. According to observer, objects were about fifty feet in diameter and three feet in depth.

   NOTE: Observer has had occasion to frequently observe USAF C-54's in flight in the local area and states the objects had a diameter about three-quarters of the wing span of a C-54 and a depth of about one-third of the depth of a C-54 when viewed from the side.
9. Direction of flight: Objects were moving in a southerly direction.
10. Tactics or maneuvers: Movements of objects were horizontal but slightly erratic as to speed.
11. No evidence of exhaust.
12. No clouds were observable on that date.
13. No lights were observed as being attached to objects.
14. a. No wings observed
    b. No aerodynamic list of fuselage observed.
    c. No vertical jet observed.
    d. Objects, according to observer, definitely had an appearance of a spinning motion; however no rotating cylinder or cone was observed.
    e. No aerostatic lifting devices were attached to objects.
15. a. No propeller or jet device observed
    b. No rotor observed.
    c. No aerodynamic vanes observed.
    d. No visible exhaust or jet openings.
16. a. No fins observed.
    b. No stabilizers observed.
17. No air ducts observed.
18. Speed estimated by observer to be approximately two hundred mph.
19. No sound; objects had a purported "whoosh" sound

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DOD DIR 5200.10

[redacted]

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PART II (Cont'd)

20. Objects vanished from view after about eight seconds, obscured by uprights of water tank which can be noticed in the film.

RELATIVE TO OBSERVER

1. Name of observer: [redacted]
2. Address: [redacted] Great Falls, Montana
3. Occupation: [redacted]
4. [redacted] Legion Park, Great Falls, Montana
5. Pertinent hobbies: Observer is not an amateur astronomer, pilot or engineer; however, he has broadcast sporting events and is interested in photography
6. Ability to determine color, speed and size of moving objects of observer should be relatively good in view of his experience as a sporting events announcer.
7. Reliability of observer: Enjoys an excellent reputation in the local community and is regarded as a reliable, trustworthy and honest individual.
8. Notes relative to observer on sightings in general: Mr. [redacted] stated to the undersigned that he had read numerous newspaper articles on the subject of flying discs and flying saucers and had not attached very much significance to them. However, Mr. [redacted] almost invariably carries a camera in order that he may make "opportunity pictures" and had previously thought that if he could see such unventional aircraft in flight, he would take motion pictures of them.
   b. Observer's attention was definitely drawn to objects by their glint of light.
9. Witnesses: Miss [redacted], age 19, employed as a secretary. Miss [redacted] impressed interrogator as being a fairly reliable individual and of good sound judgment. Miss [redacted] confirmed sightings and number of objects and in substance verified Mr. [redacted]'s statements as regards objects' appearance, shape, speed, sound and direction of flight.

GENERAL

1. Teletype sequences of local weather conditions: On 4 October 1950, Mr. C. Robert Guern, Chief Weather Observer, U. S. Weather Office, Gore Field, Great Falls, Montana, after first examining the teletype sequences of local weather conditions, Great Falls area, stated that there were thin scattered clouds, thirty thousand feet, visibility sixty miles, barometric reading, 1013.9 millobars, temperature seventy-seven degrees, dew point, forty-five degrees, altimeter 30.02 southwesterly winds, twenty-five miles per hour. Time of this teletype sequence was 1130 hours, 15 August 1950.

2. Winds Aloft Report received from Mr. C. Robert Guern, Chief Weather Observer, U. S. Weather Office, Gore Field, Great Falls, Montana, who stated that:

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[redacted]

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WINDS ALOFT REPORT (Cont'd)

at 0800, surface winds, 290 degrees, 15 miles per hour,
4000 feet, 270 degrees, 19 miles per hour,
5000 feet, 240 degrees, 25 miles per hour
6000 feet, 250 degrees, 22 miles per hour
7000 feet, 270 degrees, 22 miles per hour
8000 feet, 270 degrees, 31 miles per hour
9000 feet, 260 degrees, 43 miles per hour
10,000 feet, 260 degrees, 45 miles per hour
12,000 feet, 260 degrees, 42 miles per hour
14,000 feet, 260 degrees, 34 miles per hour
16,000 feet, 270 degrees, 34 miles per hour
18,000 feet, 270 degrees, 33 miles per hour
20,000 feet, 270 degrees, 36 miles per hour
25,000 feet, 260 degrees, 26 miles per hour

at 1400 hours, same date, winds aloft readings were:

surface winds, 230 degrees, 24 miles per hour
4000 feet, 240 degrees, 25 miles per hour
5000 feet, 250 degrees, 36 miles per hour
6000 feet, 250 degrees, 41 miles per hour
7000 feet, 250 degrees, 40 miles per hour
8000 feet, 250 degrees, 35 miles per hour
9000 feet, 260 degrees, 28 miles per hour
10,000 feet, 260 degrees, 24 miles per hour
12,000 feet, 260 degrees, 30 miles per hour
14,000 feet, 260 degrees, 55 miles per hour
16,000 feet, 250 degrees, 54 miles per hour
18,000 feet, 260 degrees, 36 miles per hour
20,000 feet, 260 degrees, 34 miles per hour
25,000 feet, 260 degrees, 39 miles per hour

There were no testing devices nor Raysonde devices sent aloft between the hours of 0800 and 1400 hours, 15 August 1950. Raysonde instruments were sent aloft at 0800 and 1400 hours, 15 August 1950 by the U. S. Weather Bureau, Gore Field, Great Falls, Montana. Mr. Guern further stated that there were no celestial phenomena listed in the U. S. Weather Bureau report for the twenty-four hour period 0800 hours, 15 August 1950, to 0800 hours, 16 August 1950.

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DECLASSIFIED AFTER 12 YEARS.
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[illegible] 3D 0302

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DEPARTMENT OF THE AIR FORCE
STAFF MESSAGE DIVISION

INCOMING CLASSIFIED MESSAGE

[redacted]

12 October

HQC002
XTA003
CXB003
JUPQG 03
RR JEPHQ
DE JUPQG 500
R 112251Z ZHJ
FM CO 1701 AT UG GREAT FALLS AFB MONT
TO HQ USAF WASH DC
UNCLASSIFIED
[redacted] GFOPP-10-1927 PD UNSG AFOIN-2A2 MT PD [redacted]
[redacted] IS STILL A RESIDENT OF GREAT FALLS PD HOME ADDRESS [redacted] SOUTH CMA HOME PHONE [redacted] BUSINESS PHONE [redacted] CMA EMPLOYMENT UNCHANGED PD
11/2315Z OCT JUPQG

7 Cys AFOIN

DOWNGRADED AT 3 YEAR INTERVAL
DECLASSIFIED AFTER 12 YEARS.
DOD DIR 5200.10

ACTION: OIN

OFF IN: 71946 (12 Oct 52) FRD/dfr

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RESTRICTED

AFHQ FORM 0-309g
19 JAN 51
PREVIOUS EDITIONS OF THIS FORM MAY BE USED.

16—63734-1 ☆ U.S. GOVERNMENT PRINTING OFFICE: 1951—O-927440

RAØ41

PFØ34

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JEPHQ BØ28

RR JWPQG JEDWP 222

DE JEHQ 392A

R 212219Z ZNJ

FM HQ USAF WASHDC

TO JWPQG/CO 17Ø1 AT WG GREAT FALLS AFB MOT

INFO JEDWP/CHIEF ATIC WPAB OHIO

/B [redacted] FROM CLN AFOI 5Ø862 REF YOUR MSG GFOPP-1Ø-1Ø27 DTD 11 OCT 52. WE HAVE ITTN PERSONAL LETTER TO MR. [redacted] SATIG OUR DESIR TO BORROW 16 MM MOVIE OF FLYING OBJECTS TAKN 15 AUG 5Ø OVER GRET FALLS SINCEOUR COPY THIS FILM WAS INADVERTENLY LOST AND WE NOW EQUIR IT FOR COMPARISON WITH RECENT MOVIES AND OTHER PHOTOGRAPHS. INFORMED HIM THAT AN OFFICER YOUR BASE WOULD CONTACT HIM PERONALLY AND GIVE HIM LOAN RECEIPT FO FILM IF HT IS WILLING TO LEND IT TO US. IF BALKY HE CAN BE TOLD FOR SAKEOF PERSUASIO THAT WE COSIDER HIS FIL TO BE VERY PERTINENTTO CURRENT FLYOB ANALYSIS. INFORMHIM FILM WILL BE RETURNED AT EARLIET PRACTICABLE DATE. REQUEST THIS ACTON BE TAKEN IMMEDIATELYSINCE LETTE SHOULD HAVE REACHED HIM BY NOW. AIR MAIL FILM THIS HQ ATTN AFOIN-2A2. IN RESPONS REPLY TO AFOIN-2A2.

21/2301Z OCT JEPHQ

ACTION

UNCLASSIFIED

ACTION

ATIA
2. ATI
3 C. files

UNCLASSIFIED

ATIC

7:58

21 Oct

Cy-1

SIMD C837

HQ0825

XTD032

CXE043

JWPQG 12

FP JEPHQ

DE JWPQG 18C

P 2923362

RESTRICTED

DEPARTMENT OF THE AIR FORCE
STAFF MESSAGE DIVISION
OCT 30 [illegible] 52
INCOMING CLASSIFIED MESSAGE
HQ. USAF

UNCLASSIFIED

FM CO 1701AT WG GREAT FALLS AFB MONT

TO HQ USAF WASH D C

UNCLASSIFIED

/R [redacted] GFOIN-10-2115 ATTN AFOIN-2A2. URMSG AFOIN-2A2. FOL FACTS ESTB RESULT SUBJ INTERVIEW 28 OCT 52 MR [redacted] AT LEGION PARK, GRET FALLS MONT: FILM HAS BEEN SHOWN CIVIC SPORTS CLUBS BE MR [redacted] FILM ORIG LENT AF, OSI OFF DTD NOT ISSUE REC. FILM RTRN 15 TO 20 FRAMES MIS FR ORIG REEL ACCORDING TO MR [redacted] AND SERVERAL NEWSMEN, SPLICING OF PROFESSIONAL NATURE. COMMENTATOR [redacted] DENOUNCED THOSE CLAIMING TO HAVE SEEN FLY OBJ. ART CAUSED MR [redacted] LOSS OF 9 OF 14 RAD STA AS SPONSORS FOR SPORTCASTS. MR [redacted] HAS INSTIGATED LEGAL ACTION AGAINST MR CONSIDINES SPONSORS. MR [redacted] FILM HAS BEEN VOL TO AF FOL COND: NO FRAMES W/B FURTHER

ACTION COPY

CAF IN: 81609 (30 Oct 52) Page 1 of 2 pages

242

DOWNGRADED AT 3 YEAR INTERVALS.
DECLASSIFIED AFTER 12 YEARS.
DOD DIR 5200.10

2X

UNCLASSIFIED

AFHQ FORM 19 JAN 51 0-309g
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DEPARTMENT OF THE AIR FORCE
STAFF MESSAGE DIVISION

INCOMING CLASSIFIED MESSAGE

UNCLASSIFIED

PAGE TWO JWPQG 10C

[redacted]

REMOVED FR REEL. FILM SHALL BE RTRN, IN HIS POSSESSION NLT 27 NOV 52 FOR USE EVIDENCE LEGAL PRO. FILM FWD 29 OCT 52 REGIW AIR MAIL. HAVE ISSUED MR [redacted] APROP REC.

30/2010Z OCT JWPQG

DOWNGRADED AT 3 YEAR INTERVALS.
DECLASSIFIED AFTER 12 YEARS.
DOD DIR 5200.10

ACTION: CIN

UNCLASSIFIED

CAP IN: 27603 (30 Oct 52) Page 2 of 2 pages FER/VM

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[redacted]

UNCLASSIFIED

3 Nov 53

[redacted]

Hq USAF

ROUTINE

CO 1701 AT WG GREAT FALLS AFB MONT

X

AFOIN-10-2115
is CAF IN 80698 dtd [redacted]
(30 OCT 53)

FROM: AFOIN

Reference our AFOIN 80852 dtd 23 Oct 53 and your AFOIN-10-2115 dtd 29 Oct 53. Movie film received this date. However, it is torn at one point about one foot from beginning and has a few stripped sprocket holes in same vicinity. Splice will result in loss of one frame. In view of admonition by Mariana re further deletion of frames from reel desire to know if film was in this condition when obtained from Mariana and, if so, did receipt given him reflect this? In response reply to AFOIN-2A3.

242

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DOD DIR 5200.10

[redacted]

UNCLASSIFIED [redacted]

1 1

Maj Dewey J. Fournet, Jr.

AFOIN-2A3

71379

DONALD E. [redacted], Captain, USAF
Executive, Topical Division
Deputy Director for Estimates
Directorate of Intelligence, DCS/O

[redacted]

[redacted]

UNCLASSIFIED

DEPARTMENT OF THE AIR FORCE
STAFF MESSAGE DIVISION

INCOMING CLASSIFIED MESSAGE

[redacted]

SID C177

HQC2C5

XTA188

CXB134

JWPQG 53

PP JEPHQ

DE JWPQG 2QC

P 0417352 ZNJ

FM CO 1701 AT WG GREAT FALLS AFB MONT

UNCLASSIFIED

TO HQ USAF WASHDC

4 Nov 52

/R [redacted] OPR-11-0215 EF AFOIN-2A2 MR [redacted] A AND CONCERNED AF PERS ARE IN AGREEMENT THAT FILM WAS IN DAMAGED COND WHEN LENT TO AF. HAVE REC HIS PERMISSION TO REMOVE SUB (1) FRAME FR REEL. ORIGINALLY

04/1753Z NOV JWPQG

2X

ACTION: CIN

CAF IN: 62382 (4 Nov 52)

ACTION COPY

MCD/cc

UNCLASSIFIED

[redacted]

AFHQ FORM 0-309g
19 JAN 51
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10 Dec 52 09 44

1. ATIS ✓
2. ATI
3. C. files

RB2526

TYB023

TDB028

JEPHQ B023

FILED

RR JWPQG JEDWP 222

DE JEPHQ 72A

R 281824Z ZNJ

FM HQ USAF WASHDC

TO JWPQG/CO 1701 AT WG GREAT FALLS AFB MONT

INFO JEDWP/CHIEF ATIC WRIGHT PATTERSON AFB OHIO

UNCLASSIFIED

/[redacted] FROM AFOIN 53504 REFERENCE OUR AFOIN 50682 DTD 22 OCT 52 AND LETTER TO YOU DTD 14 NOV 52 CMA SUBJECT CLN MOVIE FILM BELONGING TO MR. [redacted]NA. DESIRE TO KNOW SPECIFICATION OF LENS USED TO OBTAIN SUBJECT MOVIES CMA PARTICULARLY FOCAL LENGTH. IN RESPONSE REPLY TO AFOIN-2A2.

28/1908Z NOV JEPHQ

ATIC INFOR 19 NOV 28

42.31

3" Wollensak Raptar f 4

ACTION

28 Nov

By —

[redacted]

DEC 13 17 40Z 52

DEPARTMENT OF THE AIR FORCE
STAFF MESSAGE DIVISION

INCOMING CLASSIFIED MESSAGE

UNCLASSIFIED

[redacted]

PARAPHRASE NOT REQUIRED. NOTIFY
CRYPTOCENTER BEFORE DECLASSIFYING

13 Dec 52

FM CO 1701 AT UG GREAT FALLS AFB MONT

O JEPHQ/ HQ UAF WASH DC UNCLASSIFIED

[redacted] GFOPT-12-2483 UR MSG AFOIN -2A-2 28/19082

NOV NR [redacted] STATES FOLG FILM TAKEN AT F-2[illegible] USED

WOLLENSAK RAPTAR 3 IN F/4 CINE TELEPHOTO ED

ACTION: OIN

CAF IN: 94579 (13 Dec 52)

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DOD DIR 5200.10

FRD/cc

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[redacted]

SMD B153

FQB261

ZYB137

XDB173

QXE125

JWRQG 64

RR JEPHQ JEDWP 222

DE JWRQG 29C

R 091715Z ZNJ

FM 170[illegible] AT WG GREAT FALLS AFB MONT

TO JEPHQ/HQ USAF WASH D C

INFO JEDWP/CHIEF ATIC WRIGHT PATTERSON AFB OHIO

[redacted] D/GFOIN-12-2583 URMSG AFOIN-282. HAVE EFF

UNSUCCESSFUL EFFORTS CONTACT MR [redacted]A. WILL OBTAIN

REQ INFO UPON RTRN FR OUT OF STATE AND WILL FWD.

GP/1730Z DEC JWPQG

DEPARTMENT OF THE AIR FORCE
STAFF MESSAGE DIVISION

DEC 9 17 55 Z 52

INCOMING CLASSIFIED MESSAGE

UNCLASSIFIED [redacted]

UNCLASSIFIED

9 Dec 52

ACTION COPY

Ref my ltr AFOIN 53504

2 X
Mg. Turner

ACTION: OIN

CAF IN: 92994 (9 Dec 52)

DOWNGRADED AT 3 YEAR INTERVALS
DECLASSIFIED AFTER 12 YEARS. NRD/md
DOD DIR 5200.10

UNCLASSIFIED

[redacted]

AFHQ FORM 19 JAN 51 0-309g
PREVIOUS EDITIONS OF THIS FORM MAY BE USED.

16—63734-1 ☆ U.S GOVERNMENT PRINTING OFFICE : 1951—O—927440

GREAT FALLS, MT

15 AUG 50 - CASE
INCLUDES movie film
IN FOLLOWING FOLDER

PHOTOGRAMMETRIC ANALYSIS OF THE "MONTANA" FILM TRACKING TWO UFO'S

Two Unidentified Flying Objects (UFO's) were sighted and photographed at about 11:30 AM MST on August 15, 1950 by [redacted] at Great Falls, Montana. Mr. [redacted] owns and operates a [redacted] in Missoula, Montana and is the owner of the [redacted]. It was during an inspection of this ball park that the sighting took place. [redacted] (and his secretary also present at the time) first noticed the UFO's as silvery objects to the NW, accidentally when looking to tell the wind by the smoke from the Anaconda Copper Company smokestack nearby. The UFO's drew his attention to the extent that he ran 60 feet from the grandstand to the parking lot, got his motion picture camera (Revere turret type 16mm) out of his car and began tracking the UFO's which appeared to him to have stopped in mid-air, remained stationary for a while and then, with a swooshing sound, floated away to the left (SW) keeping about the same distance from each other until they were lost from sight, cf. figure 1, a survey of the area near the ball park, and figure 2, a photograph of the ball park.

The color film (Daylight Kodachrome) after processing, was submitted by Mariana to USAF-ATIC. It was studied and analyzed there and also by the U.S. Navy. No information concerning their findings was released, but Mr. Al Chop (now with DAC Public Relations) recalls that the analysis was considered inconclusive, except that according to Capt. Edward Ruppelt, then head of ATIC's Project "Bluebook", it was felt that the objects shown on the film could not have been balloons. The captain recalled that the government first examined the film in 1950, then returned it to Mr. [redacted], again borrowed it in 1952, returning it to him later.

Mr [redacted] claims that the Kodachrome original, as returned to him from the Eastman Kodak Processing Laboratory, comprised 315 frames. This original film was shown by him before several service clubs and other audiences in Montana. He recalls that the first 30-odd frames showed larger images of the UFO's with a notch or band at one point on the periphery of the objects by which they could be seen to rotate in unison while on the rest of the film the objects show up only as unarticulated bright white dots. The film as returned by the Air Force, according to Mr. [redacted], had had the first 35 frames removed and only the remainder of the film was returned. He says that he has a letter in his files admitting this removal and that the clipped-off part was lost. (Pertinent ATIC files consulted on July 6, 1955, however, contain no evidence or admission that any part was removed or lost.)

Eventually, Mr. [redacted] film came into the possession of Green-Rouse Productions, at Sam Goldwyn Studios, 1041 North Formosa Street, Hollywood, from whom a 16mm and later a 35mm reprint of it were borrowed for examination and analysis in our Data Reduction Department by routine Iconolog techniques. (This action was undertaken because this film is one of the very few existing motion picture records of UFO's and is accorded considerable interest in several quarters. Such analysis was recommended by ATIC personnel in 1950 but not actually carried out.)

Visual study of the reprints, in both cinema projection and frame-by-frame examination on a Recordak, an Iconolog * and a traveling microscope † revealed the following: The reprinted part of the 16mm film comprises about 280 frames. ** The first few frames had been torn from the rest in the original but apparently were spliced correctly for the reprinting. On many of the frames two bright white round dots stand out against the dark blue sky. They are largest and brightest on the first ten or twenty frames and gradually fade away until they can no longer be definitely made out beyond frame #225. Although there are numerous other dots, spots, and specks on many of the frames, most of them are less bright, less distinct and they appear at random; presumably they are blemishes caused by imperfections of the film or the processing. Against them the two UFO images are quite conspicuous and readily distinguished by their almost constant relative orientation and sharpness as well as by their steady movement across the landscape.

The analysis of the trajectory of the two objects was carried out by tracing on an overlay vellum the relative motion of the objects with respect to fixed reference points, as far as such are visible, viz. from frame #65 to 255. The first 64 frames show no background but sky and horizontal power wires. Beginning with frame #65, what looks like a ventilator duct on the roof of a concrete grain elevator comes into view; after frame #144 the structure of a water tower sweeps across the foreground, and finally the roof of a second grain elevator on the other side of the water tower enters the picture. These frames indicate the camera was in focus. Figure 3 is a composite tracing of these landmarks together with the successive positions of the two UFO's. This figure is drawn like a panorama on the assumption that the photographer kept his stance without moving appreciably (which was reported by him and is well borne out by the constancy of the perspective). Apparent motion of the objects, under these conditions is then interpreted in terms of angular velocity of tracking. A similar overlay using the 35mm film was utilized in preparation of figure 5(a).

The Montana film contains six independent pieces of information (as functions of time) which describes the UFO images, i.e. the two degrees of freedom of each dot (as depicted on two-dimensional film) and the apparent diameter of the developed image of each. In the analysis it was convenient to treat the UFO's as a system. Thus we chose as the four degrees of freedom of this system the azimuth and altitude of the mid-point on the line

---

* The Iconolog is a film projector similar to a Recordak but equipped with crosshairs manually movable across the screen and with digitized coordinate counters which can be read off without scaling or automatically printed by an electrical typewriter or punched on IBM card for further processing. It was developed by Douglas Aircraft Co. and is manufactured by Genisco Inc., Los Angeles 64, California.

** Also a reprinted 35mm film was analyzed and proved to yield somewhat more accurate results. However, four frames, viz: #177 to #180 were missing in the 35mm reel.

† Astronomical plate measuring engine.

of centers between the images, their separation distance and their inclination to the horizon. All of the quantities, except for the inclination to the horizon * are presented in figures 5(a), 5(b), and 6.

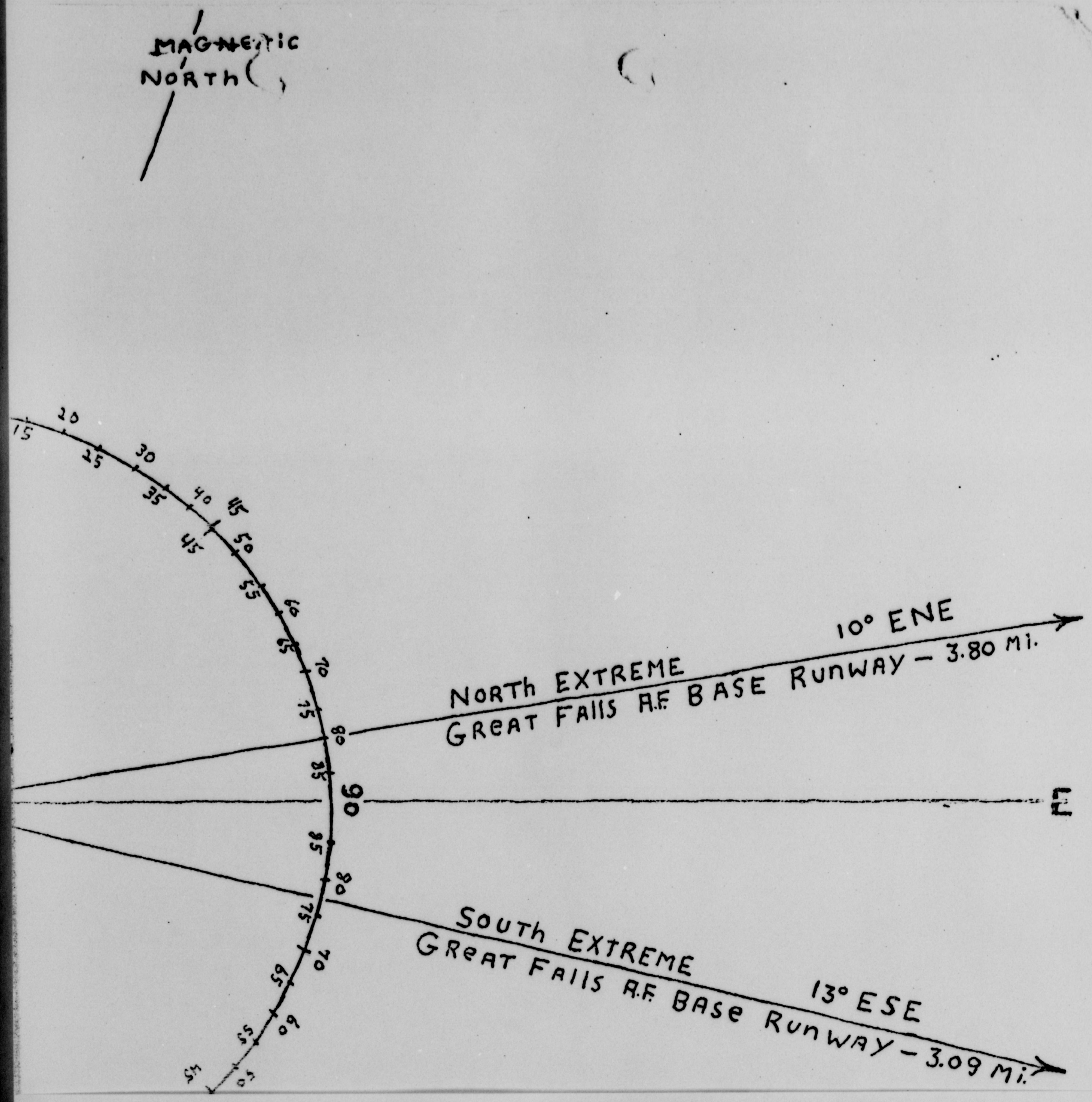
The three independent quantities (azimuth, altitude and separation) all appear to agree to within the limits of observational errors with an assumption that the UFO system held an essentially fixed configuration and executed a constant velocity rectilinear motion over the period of their filming (16 seconds). The angular (azimuth) velocity is found to be 0.0192 radians per second and the azimuth heading of the apparent course is 171° (making an angle of 55° from the line of sight to the water tower). Theoretical curves depicting the appearance of the object's motion if they were on different azimuth headings are included in figures 5(a) and 5(b), along with the observed data (cf. Appendix I for the calculation methods). As mentioned in the Appendix, some random errors exist and the true motion of the objects may well have been a gently sweeping curve with tangents bracketed between 169° and 173°. Of course, we cannot rule out some other curvilinear motion of the objects. However, any such motion would necessitate the coincidence of azimuth, altitude and separation -- all varying proportionally and "geared" together (to a separation tolerance of 1' and azimuth and altitude variation of ±5'). In any event, we shall adopt the hypothesis of nearly rectilinear fixed configuration motion as a basis of some of the following analysis, our only justification being that this is the simpler hypothesis and that in the brief period of the filming any gentle curvilinear trajectory could well be approximated by a straight line, cf. figure 4 for a map of Great Falls on which has been sketched possible UFO paths. **

Measurements of the diameter of the developed images were also made. They were less accurate (±0.01mm on the 16mm film) because of the smallness of the dimension and fuzziness of the images, figure 6. The measurements do confirm that the dots dwindle in size (and the objects finally completely disappear from view). There seem to be slight fluctuations which can be attributed to a variation in the luminosity of the objects. A somewhat detailed discussion of the degree to which these dots do or do not represent the objects photographed inclusive of aberrations and the photographic process is presented in appendix II. Some pertinent photographic experiments made in this regard are also analyzed and the results reported there. In any event it is obvious that these small images do not exactly represent the objects photographed. One can conclude, from the fact that these images fade completely away, that (unless the regressive component to their motion has been grossly underestimated) the objects were not isotropic constant luminosity radiators (Such radiators would be closely approximated by a balloon or a silver sphere shining by reflected sunlight.)

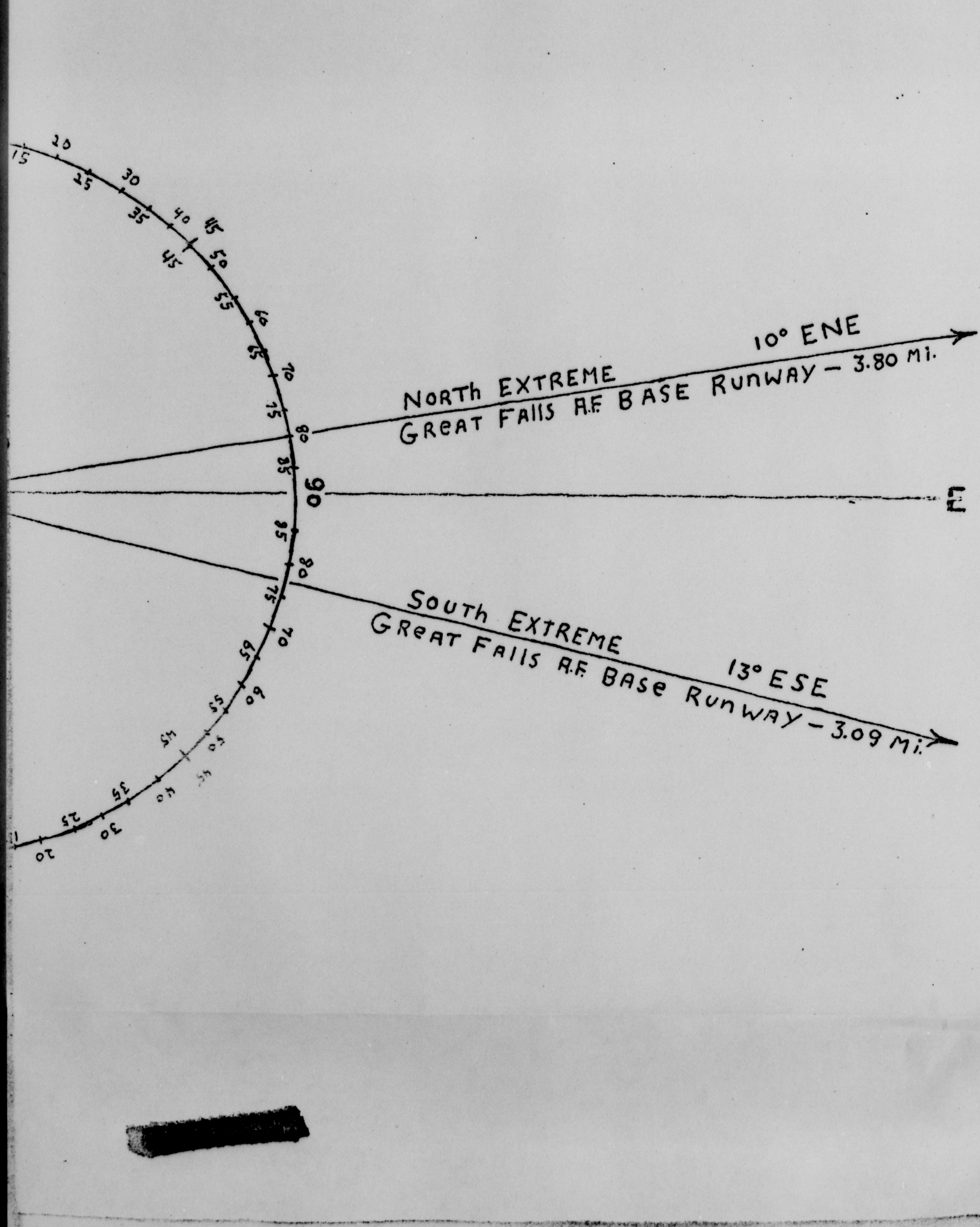
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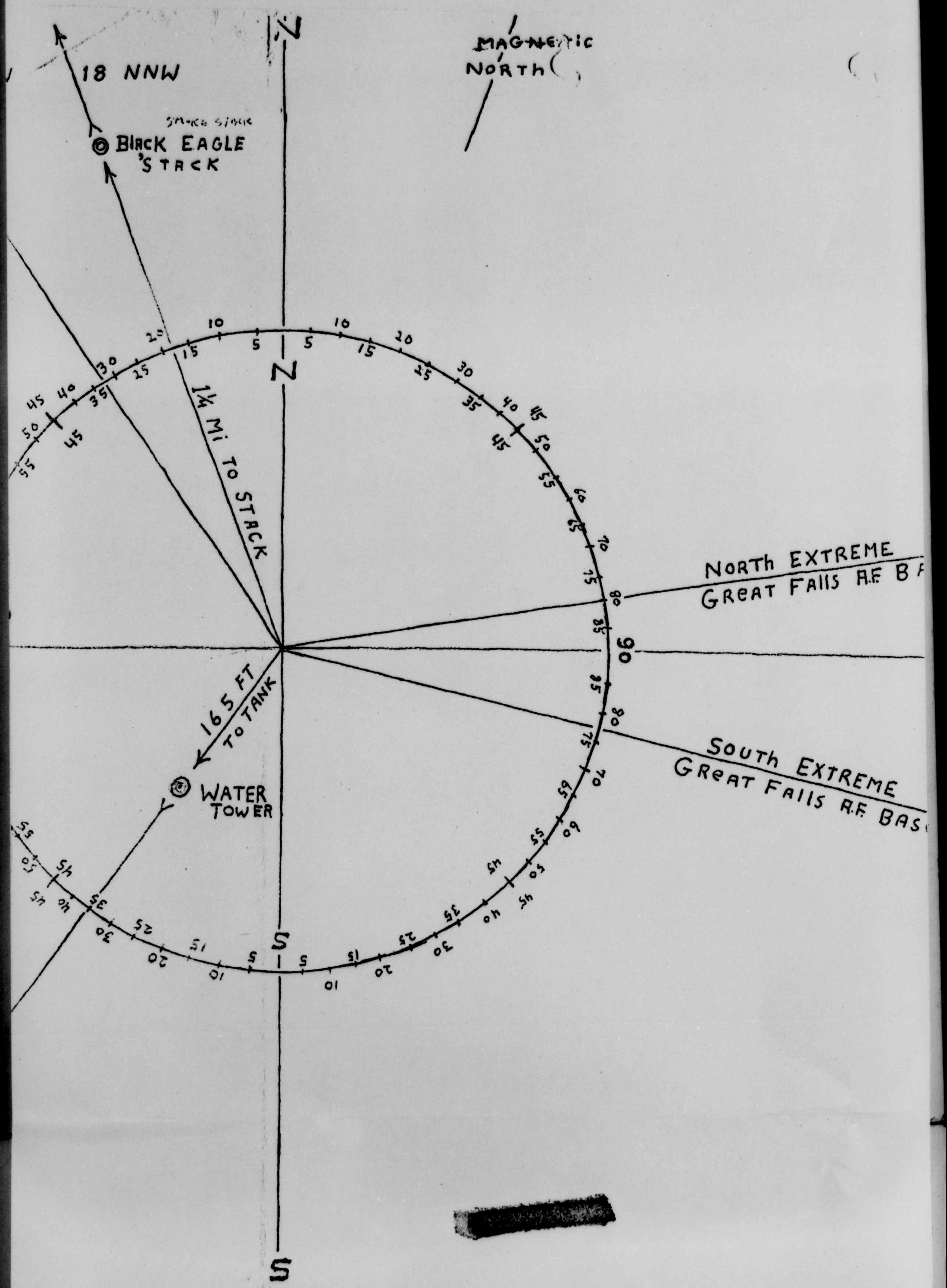
* The inclination to the horizon is found to be very small, the objects appearing to move almost in a plane parallel to the earth's surface. There is a slight decrease in the angle of inclination as the objects regress, but its small value is almost masked by the random errors inherent in the measurements.

** Figure 4 indicates three typical parallel azimuth headings of the UFO system. Any heading parallel to these would of course be possible since without parallax no valid estimation of distance can be made.

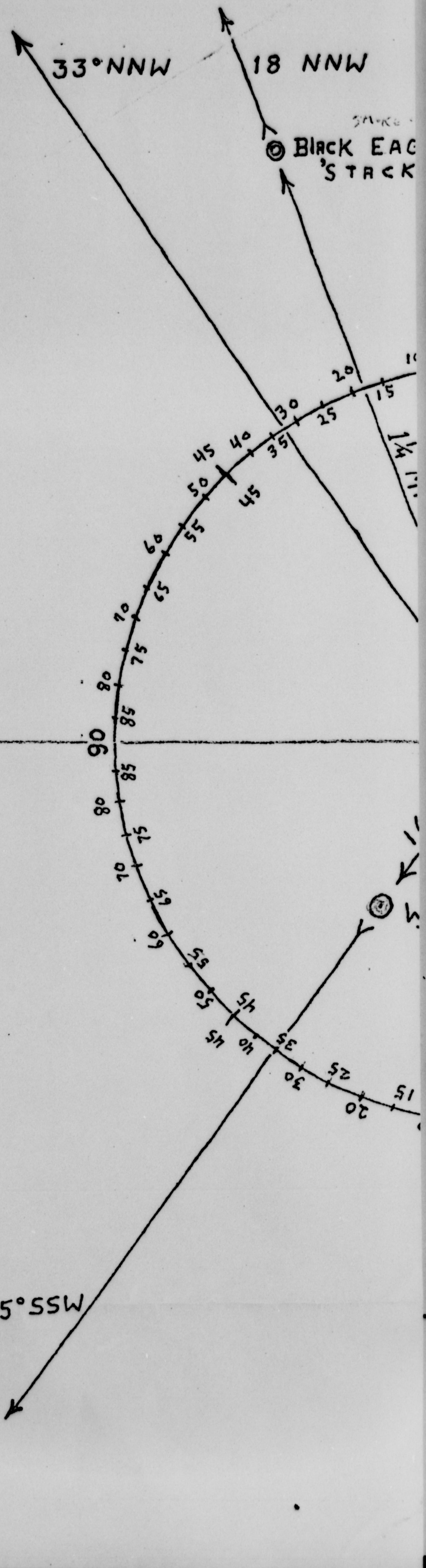

MAGNETIC
NORTH
15
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25
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35
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45
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55
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05
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15
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25
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35
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50
55
NORTH EXTREME
GREAT FALLS A.F. BASE RUNWAY – 3.80 MI.
10° ENE
06
24
SOUTH EXTREME
GREAT FALLS A.F. BASE RUNWAY – 3.09 MI.
13° ESE

MAGNETIC NORTH



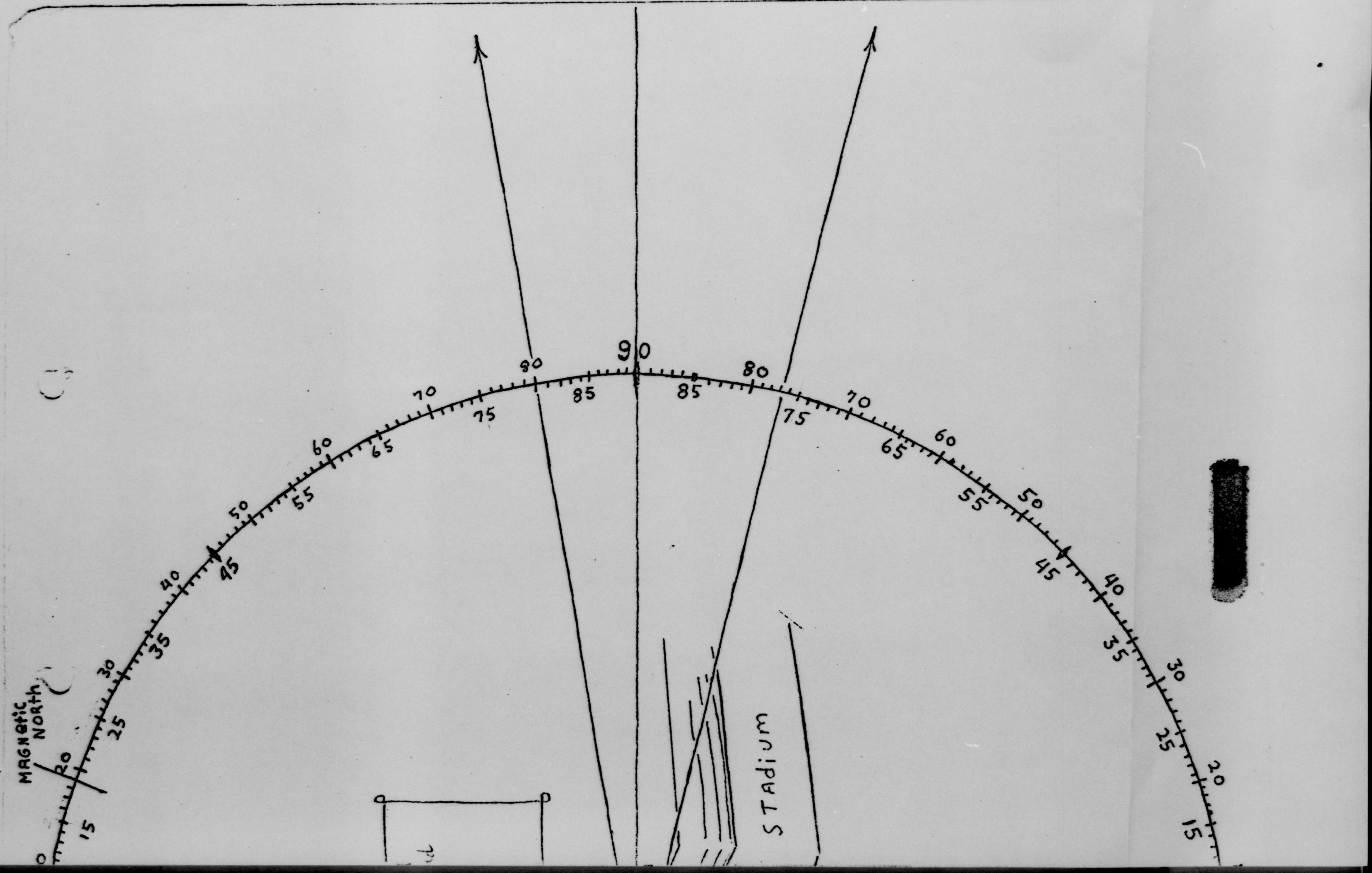

MAGNETIC
NORTH
18 NNW
SMOKE STACK
BLACK EAGLE
STACK
1¼ MI TO STACK
165 FT
TO TANK
WATER
TOWER
NORTH EXTREME
GREAT FALLS A.F. B
SOUTH EXTREME
GREAT FALLS A.F. BAS
N
S
E
W

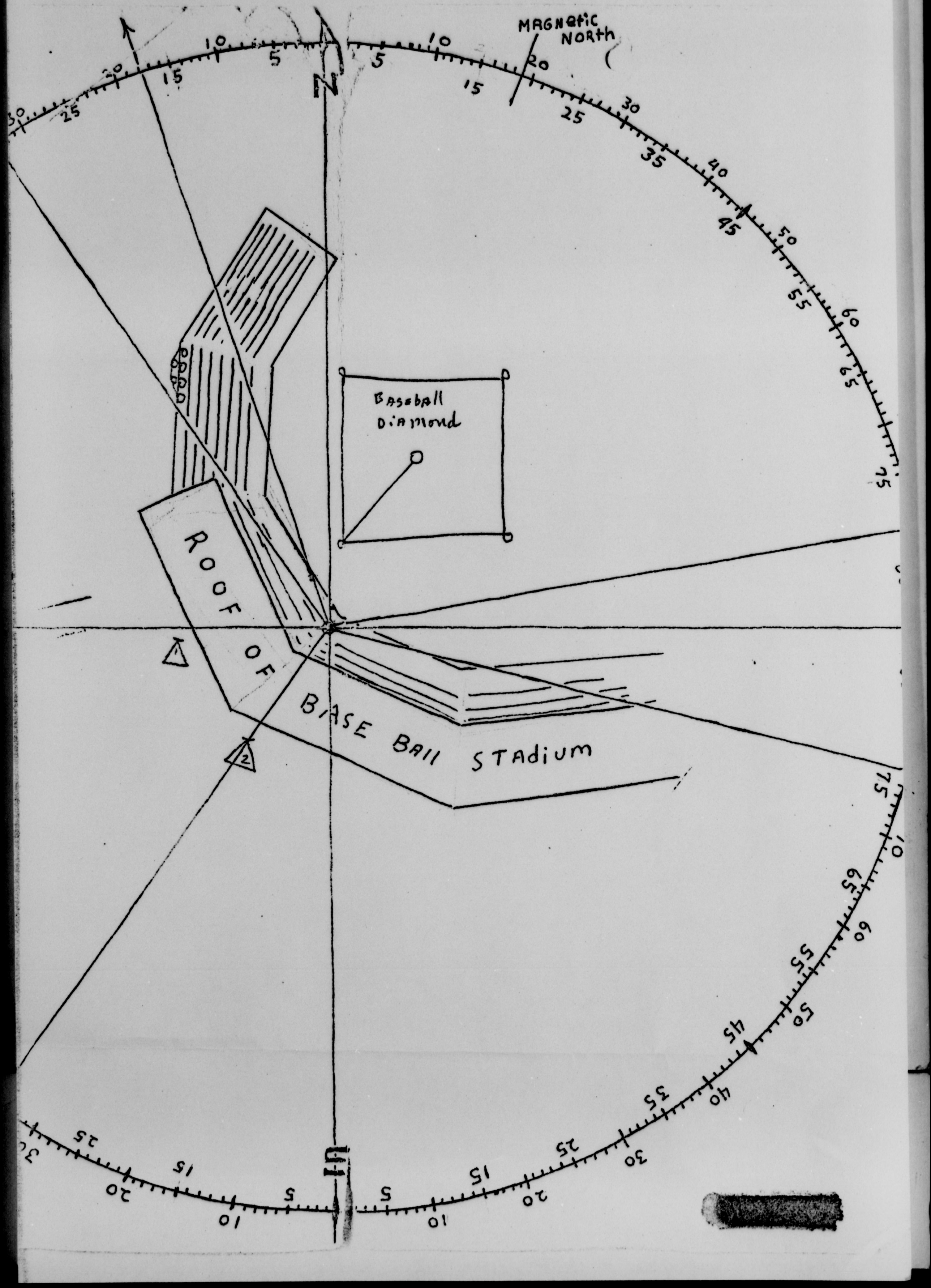


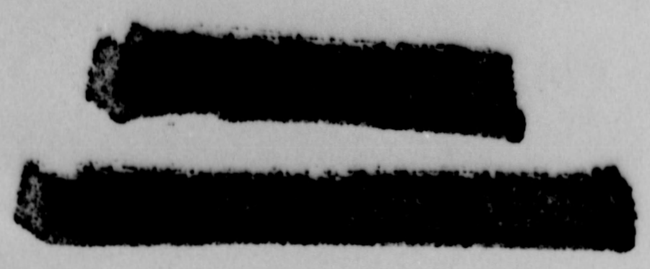


SKETCH #1

GFAFB-(mm)


90
80
85
70
75
60
65
50
55
40
45
30
35
20
25
15
10
MAGNETIC NORTH
STADIUM


MAGNETIC NORTH
Baseball Diamond
ROOF OF BASE BALL STADium
1
2



Center of Compass:
Spot where sighting first made

△1 : Spot from which film was first taken

△2 : Final reels of movie taken from approximately this indicated spot.

Distance from △1 to △2 : Approx. 10-12 feet.

SKETCH #2
GFAFB.

DOUGLAS AIRCRAFT COMPANY, INC.

PHOTOGRAMMETRIC ANALYSIS OF THE "MONTANA" FILM TRACKING TWO UFO'S

SANTA MONICA DIVISION

3

MEMO ROUTING SLIP | *NEVER USE FOR APPROVALS, DISAPPROVALS, CONCURRENCES, OR SIMILAR ACTIONS*

	NAME OR TITLE	INITIALS		CIRCULATE
	Capt Grigsby			
	ORGANIZATION AND LOCATION	DATE		COORDINATION
	4E64			
2				FILE
				INFORMATION
3				NECESSARY ACTION
				NOTE AND RETURN
4				SEE ME
				SIGNATURE

REMARKS

- Note letter & Report
- Prepare reply to former for General's signature (rough draft first.)

Dr. Hynek: for your comment on this — see pages 8 - Fig. 10, (paper clips) 278

FROM NAME OR TITLE	DATE
A. Loomis	Apr 26
ORGANIZATION AND LOCATION	TELEPHONE
4x1	59206

DD FORM 1 FEB 50 95 Replaces DA AGO Form 895, 1 Apr 48, and AFHQ Form 12, 10 Nov 47, which may be used.

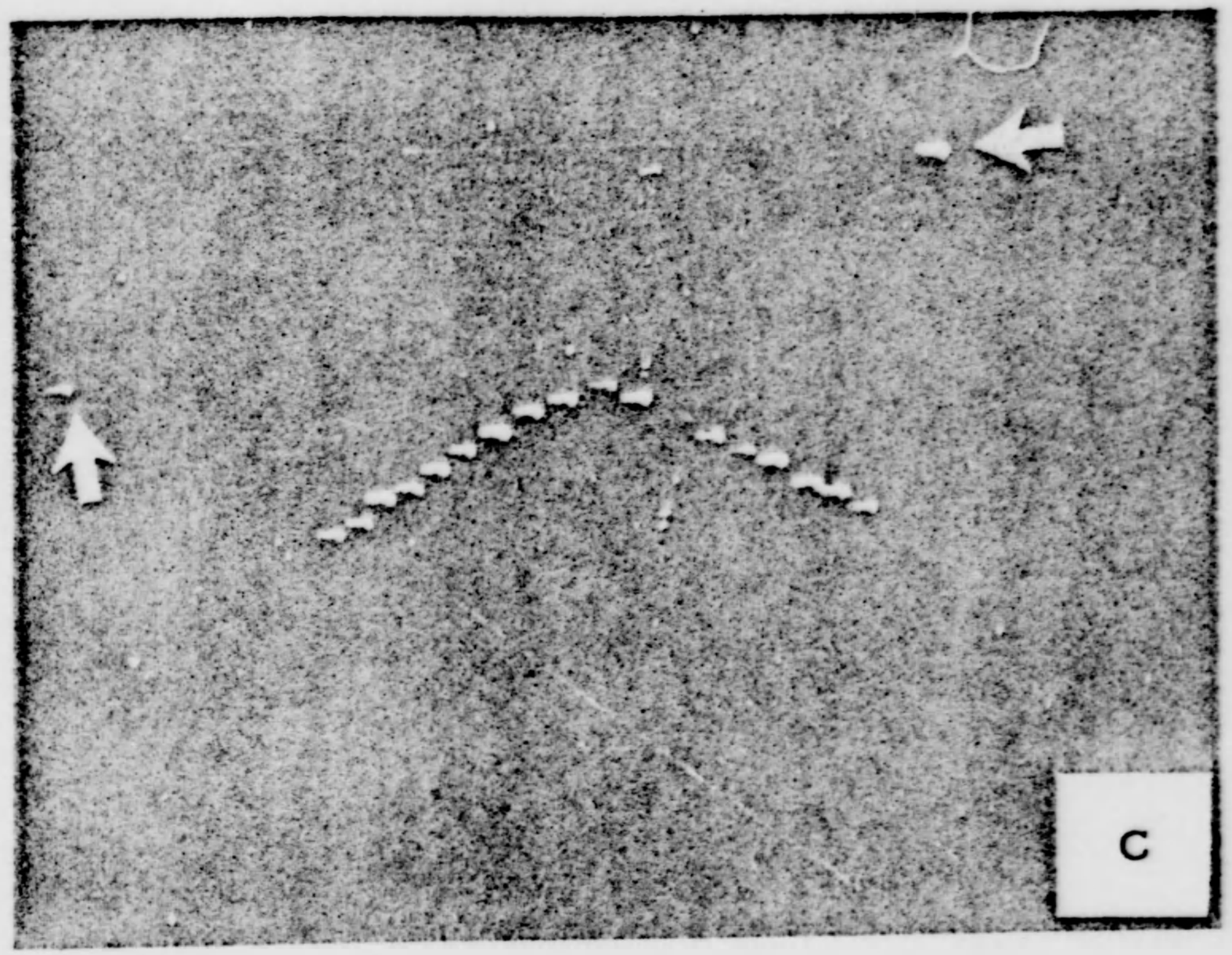
* GPO : 1951 - O 925564

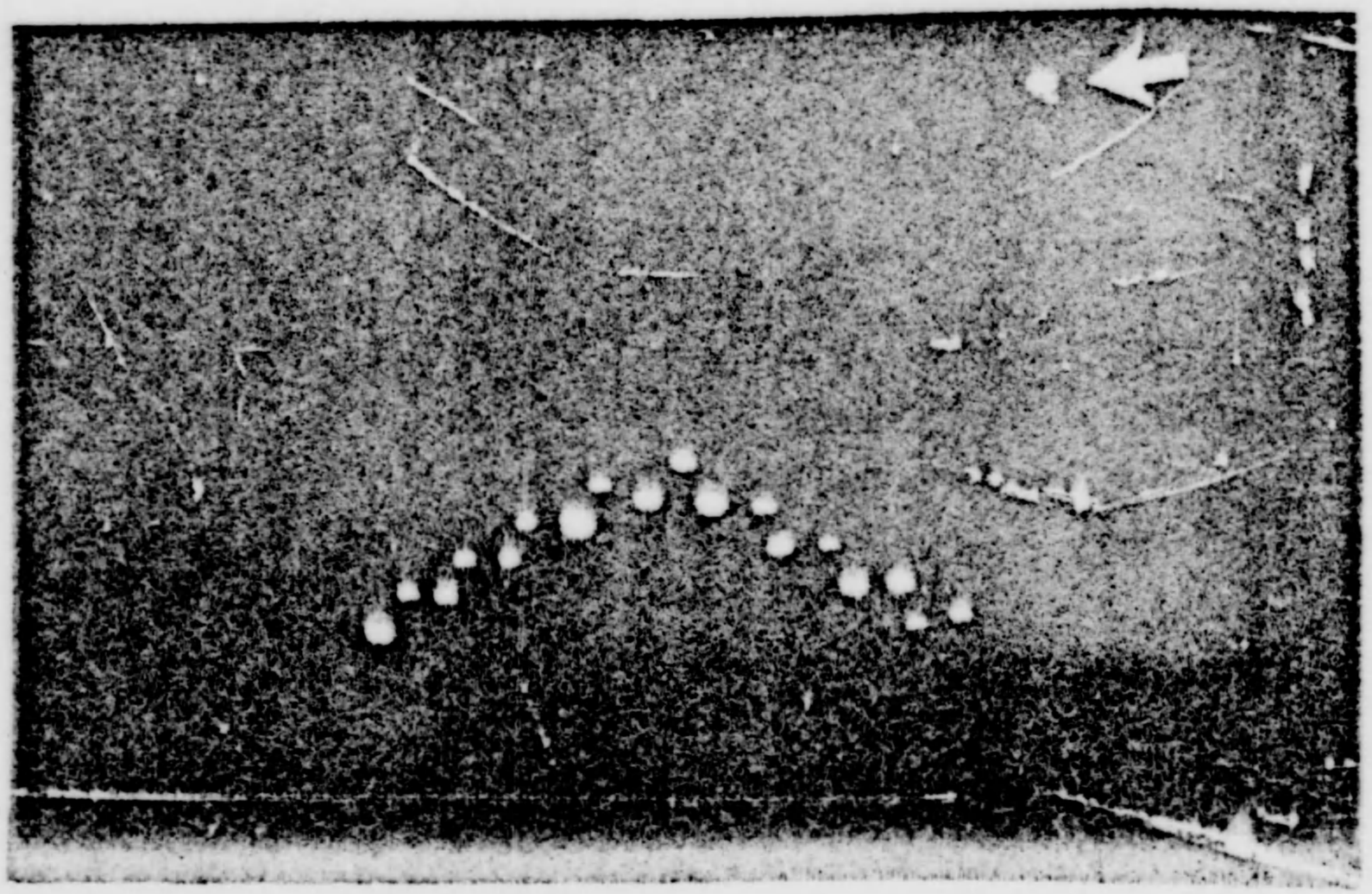
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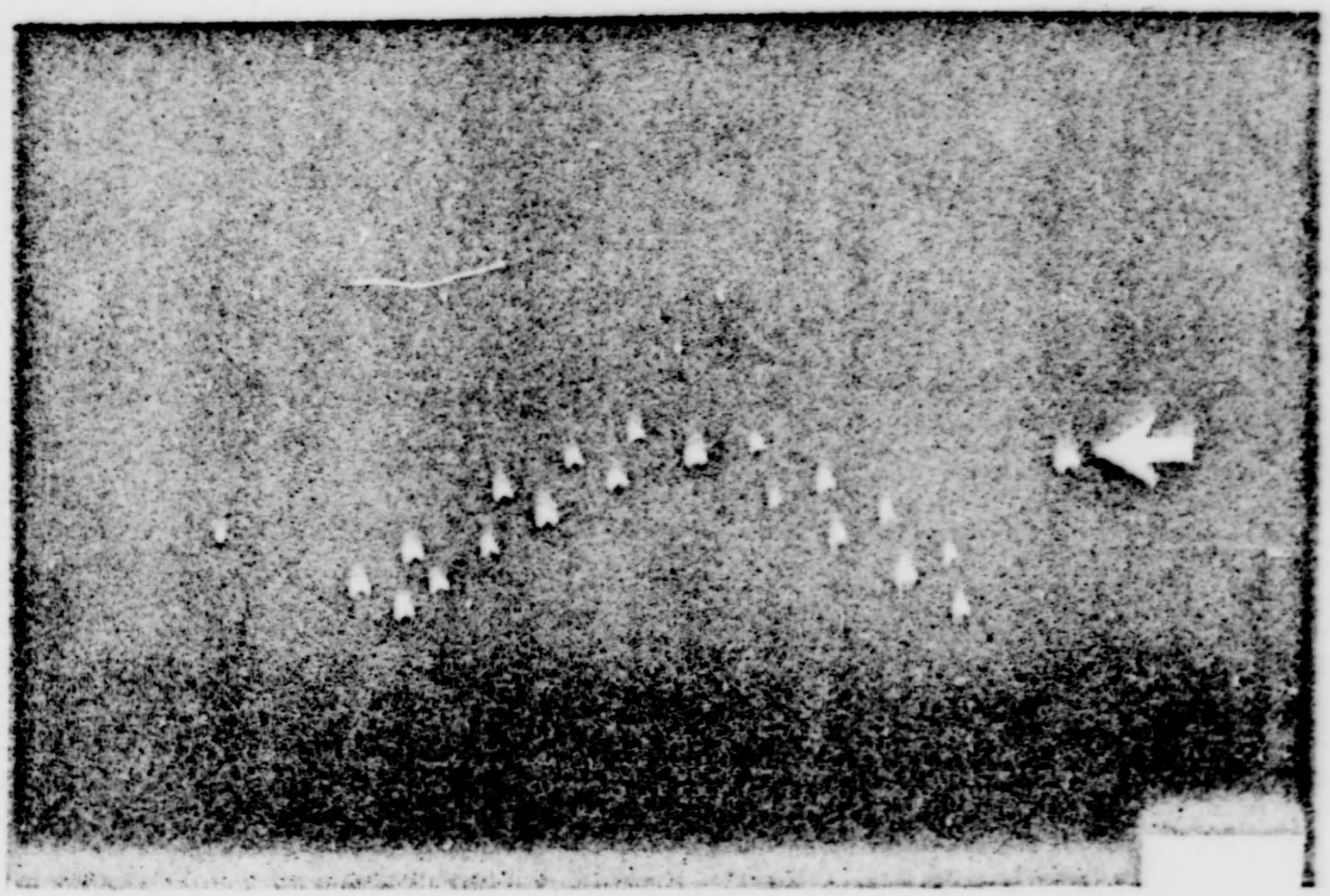
10 ONLY 8X10
GLOSSY PHOTOGRAPHS
OF ALLEGED UFO
SIGHTED AT OR NEAR
GREAT FALLS, MONTANA
15 AUG 1950

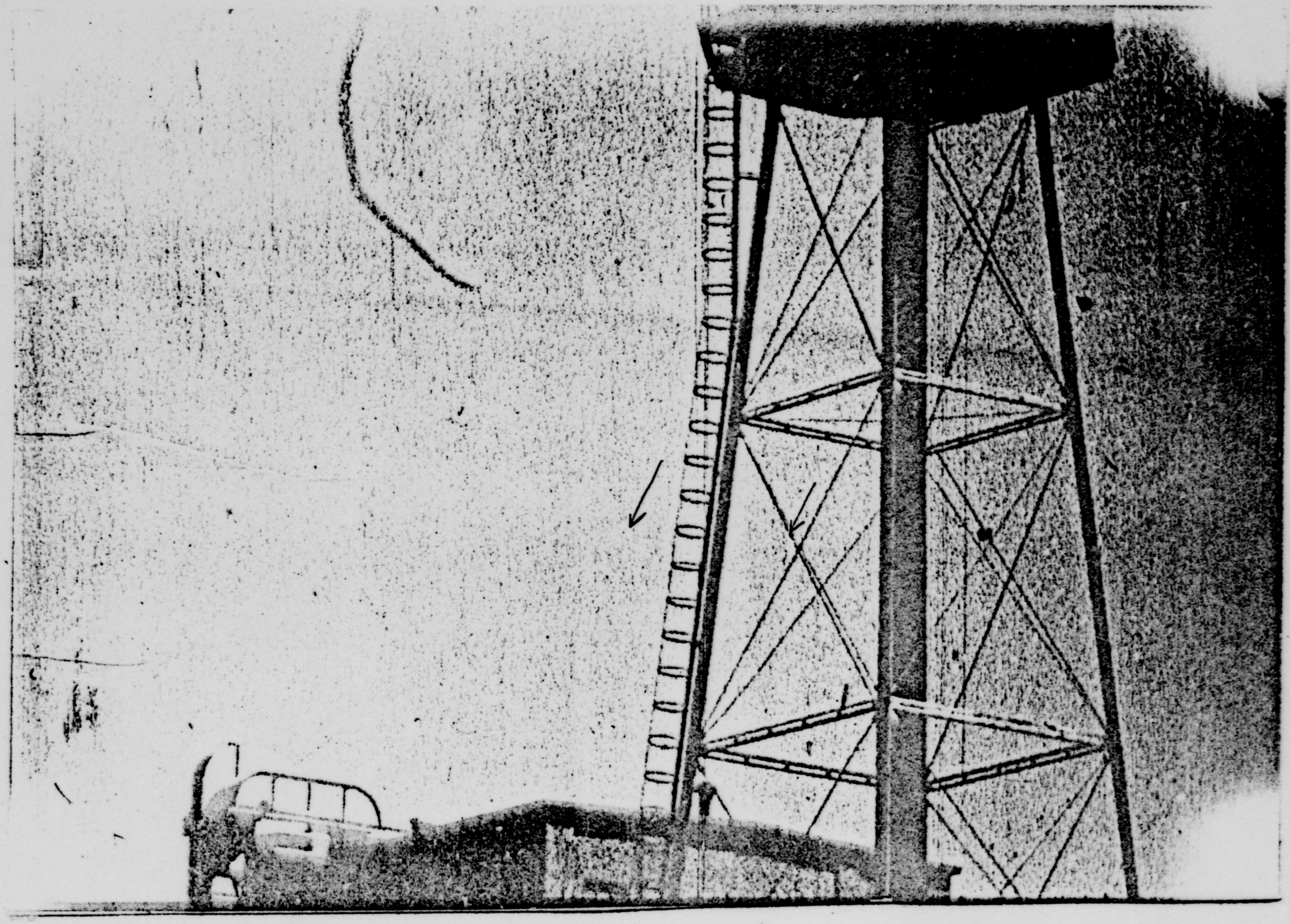
UNCLASSIFIED

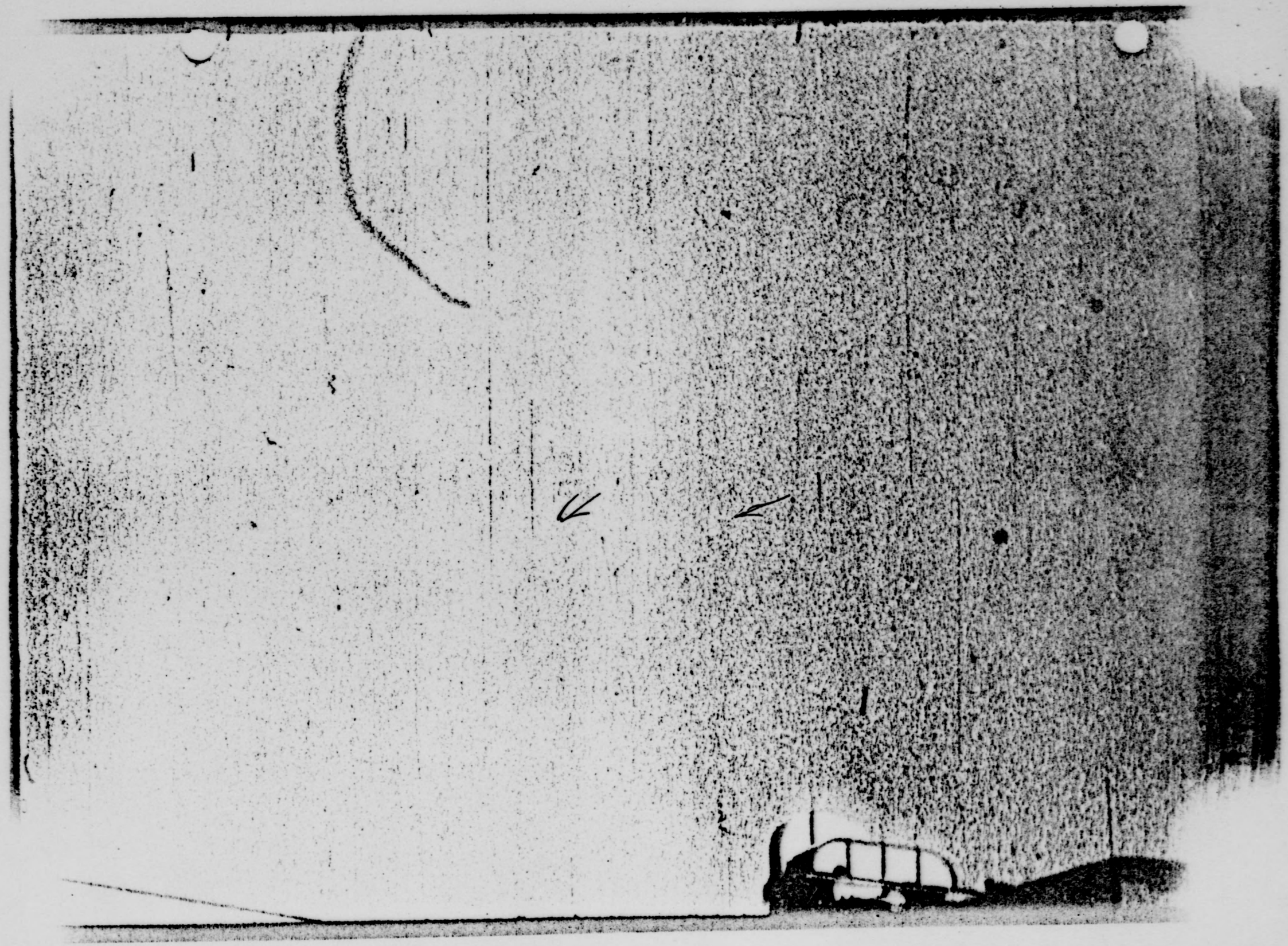

A

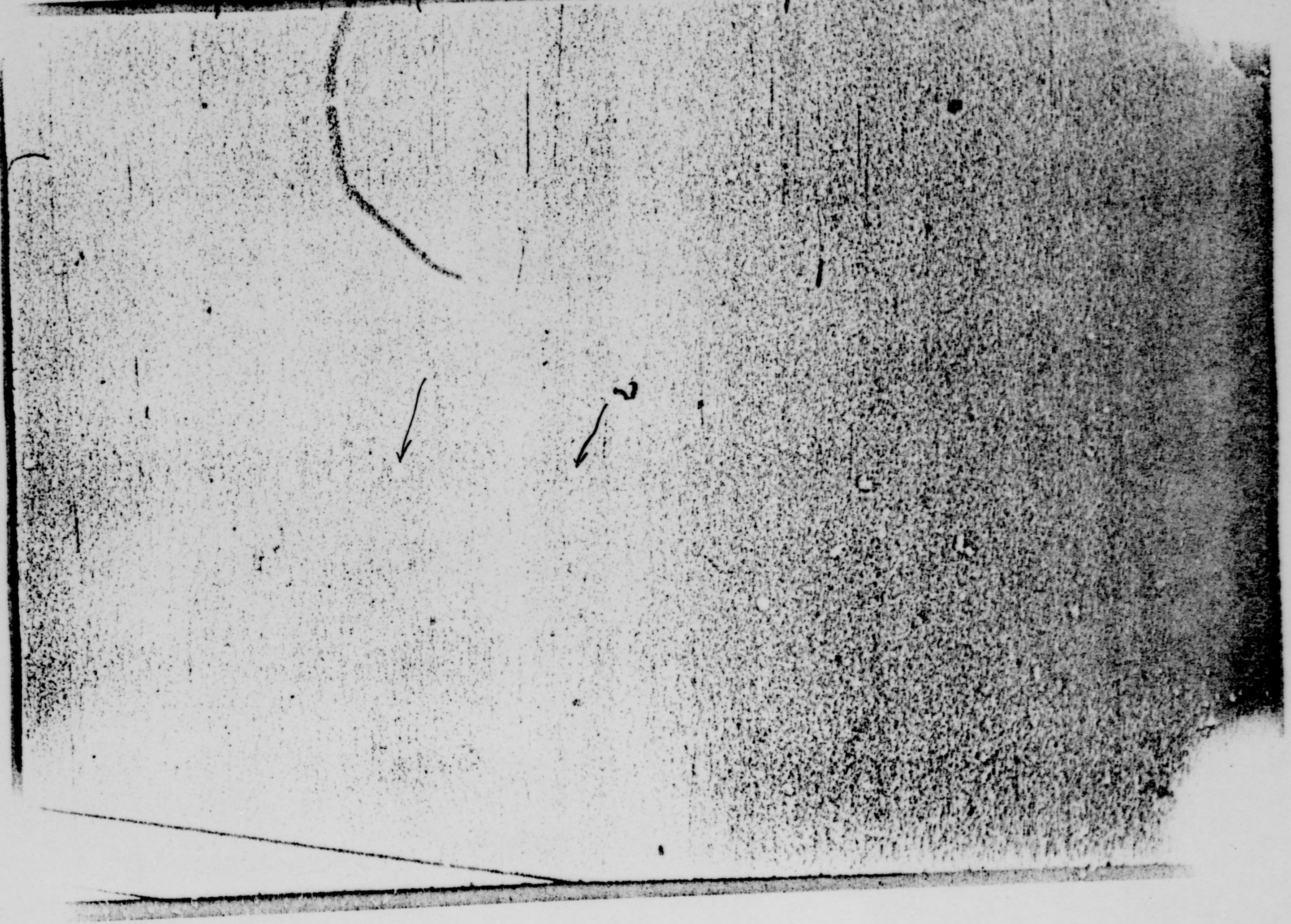

C





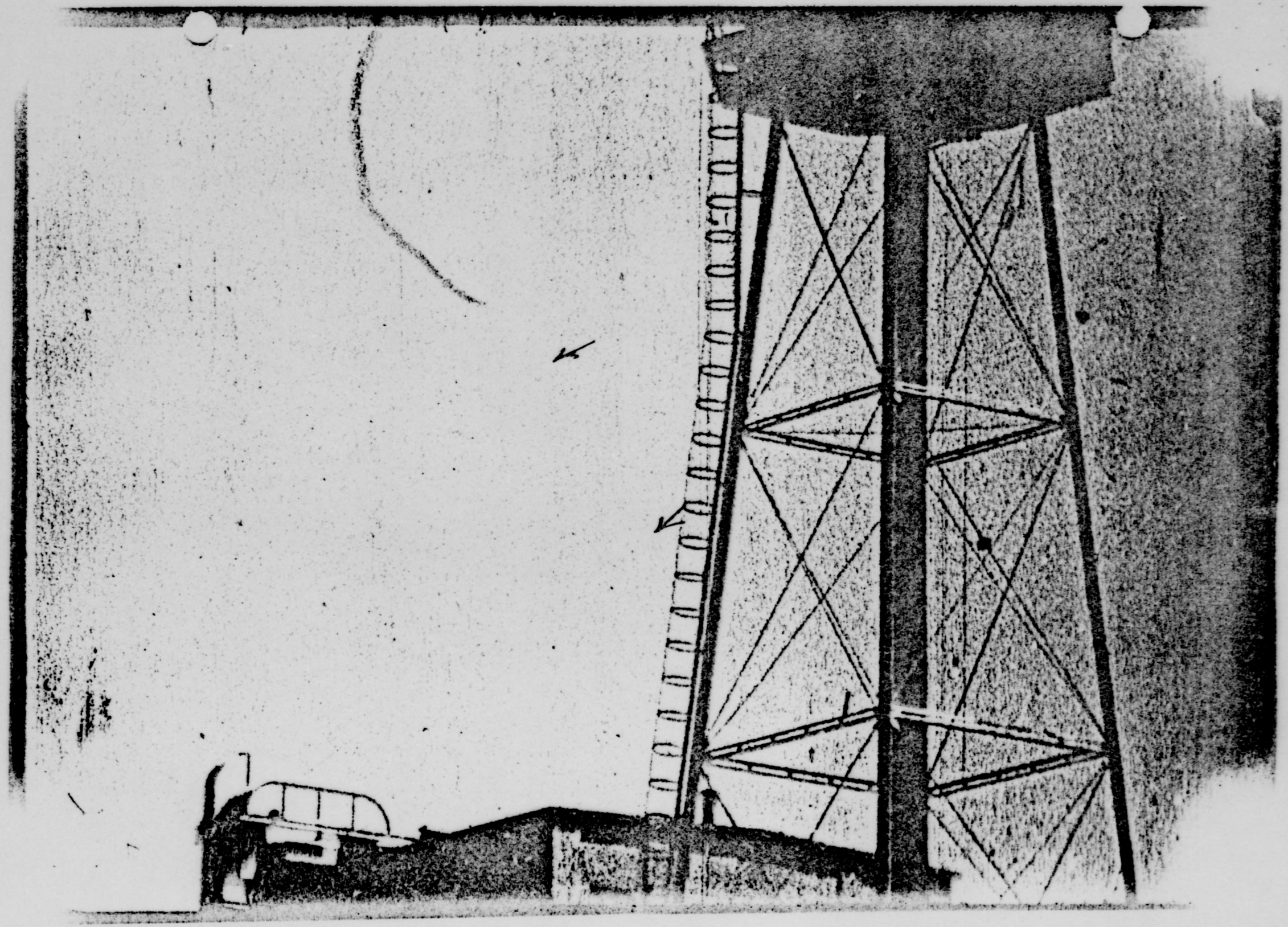


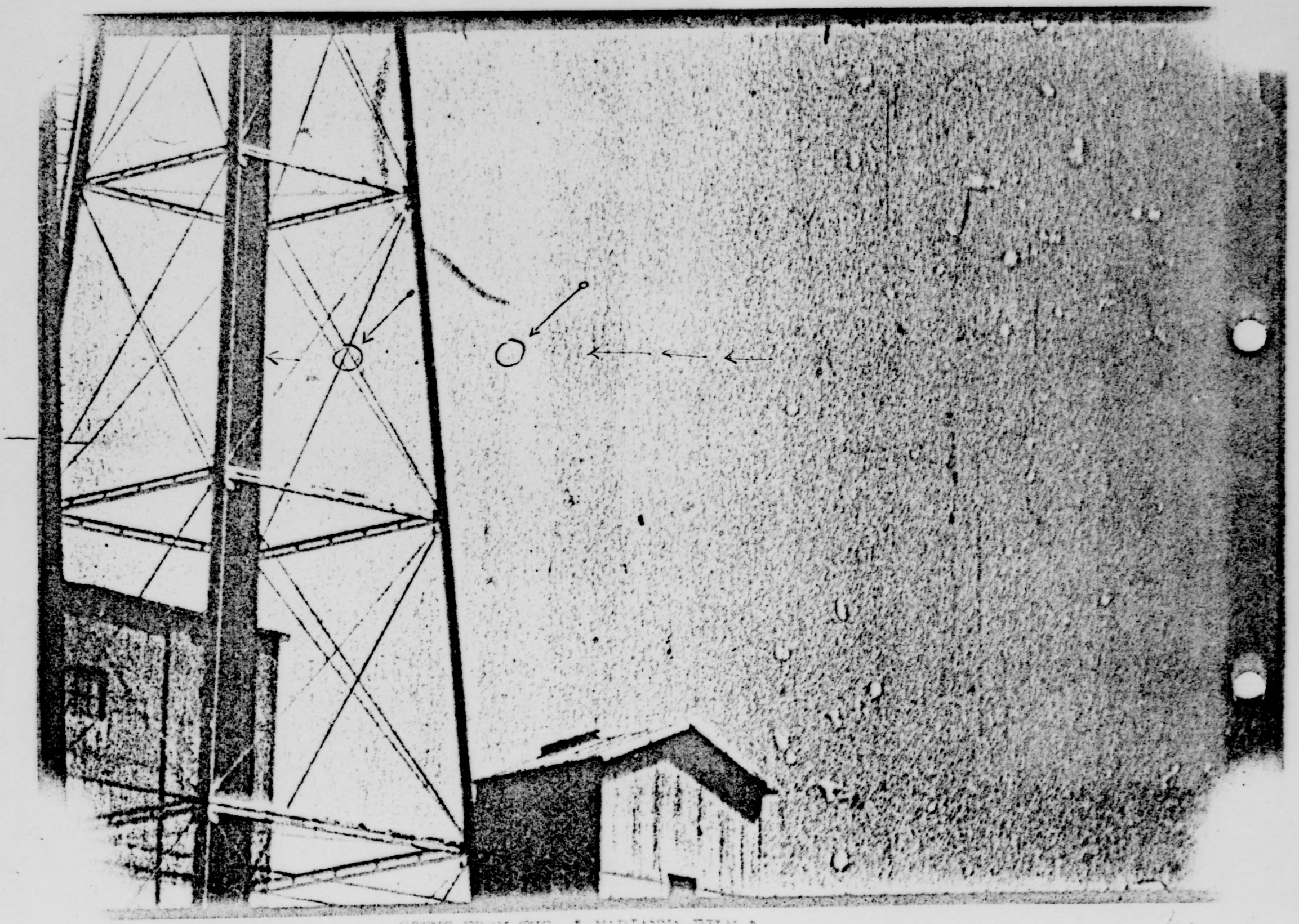




#4

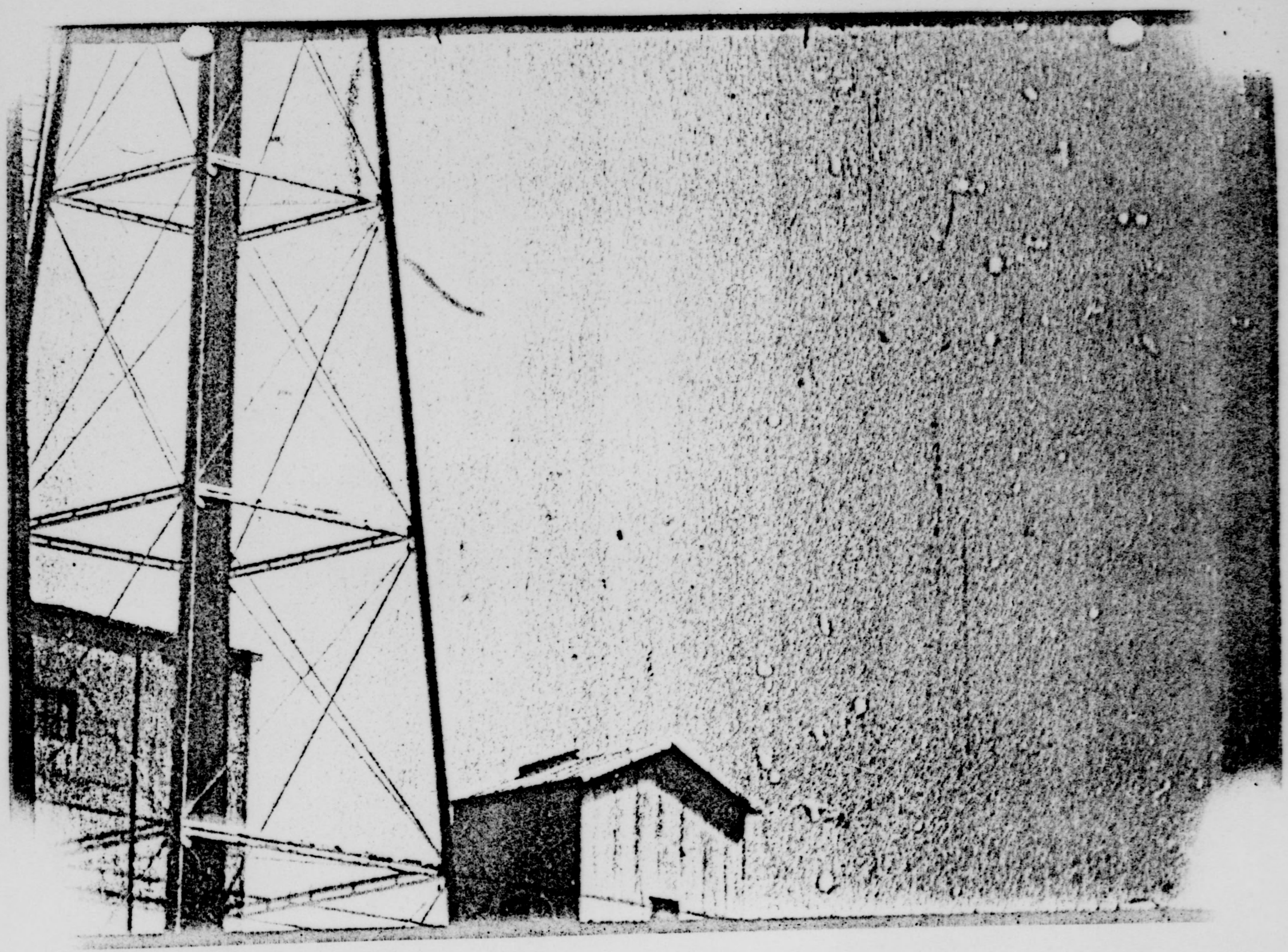
OFFICIAL U.S. AIR FORCE PHOTO
INTELLIGENCE DEPARTMENT
HQ. AMC, W-PAFB, DAYTON, OHIO





SCENE FROM THE " MARIANNA FILM "

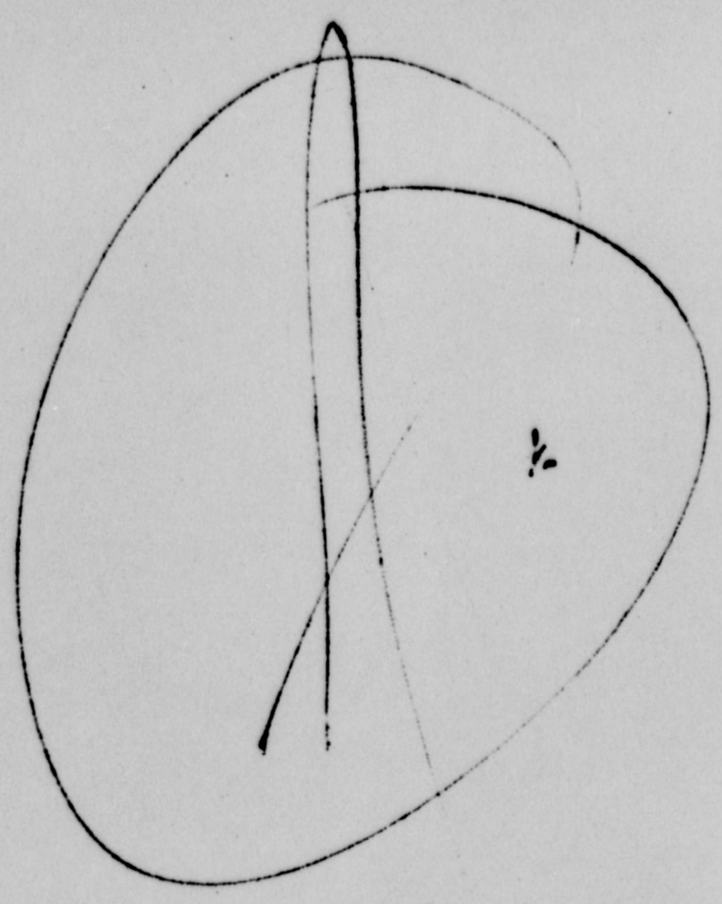
OFFICIAL U. S. AIR FORCE PHOTO
INTELLIGENCE DEPARTMENT
HQ. AMC, W-PAFB, DAYTON, OHIO

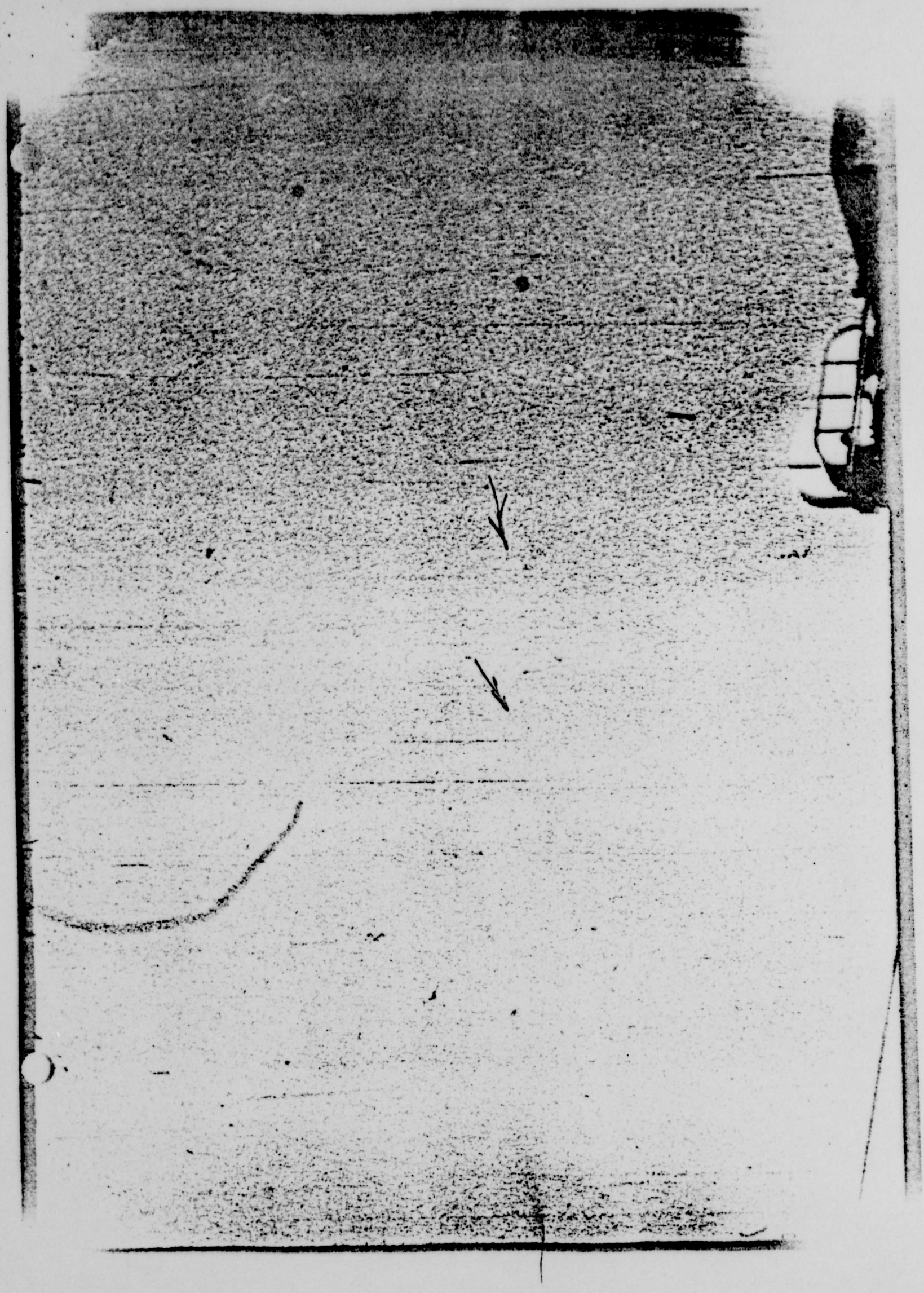


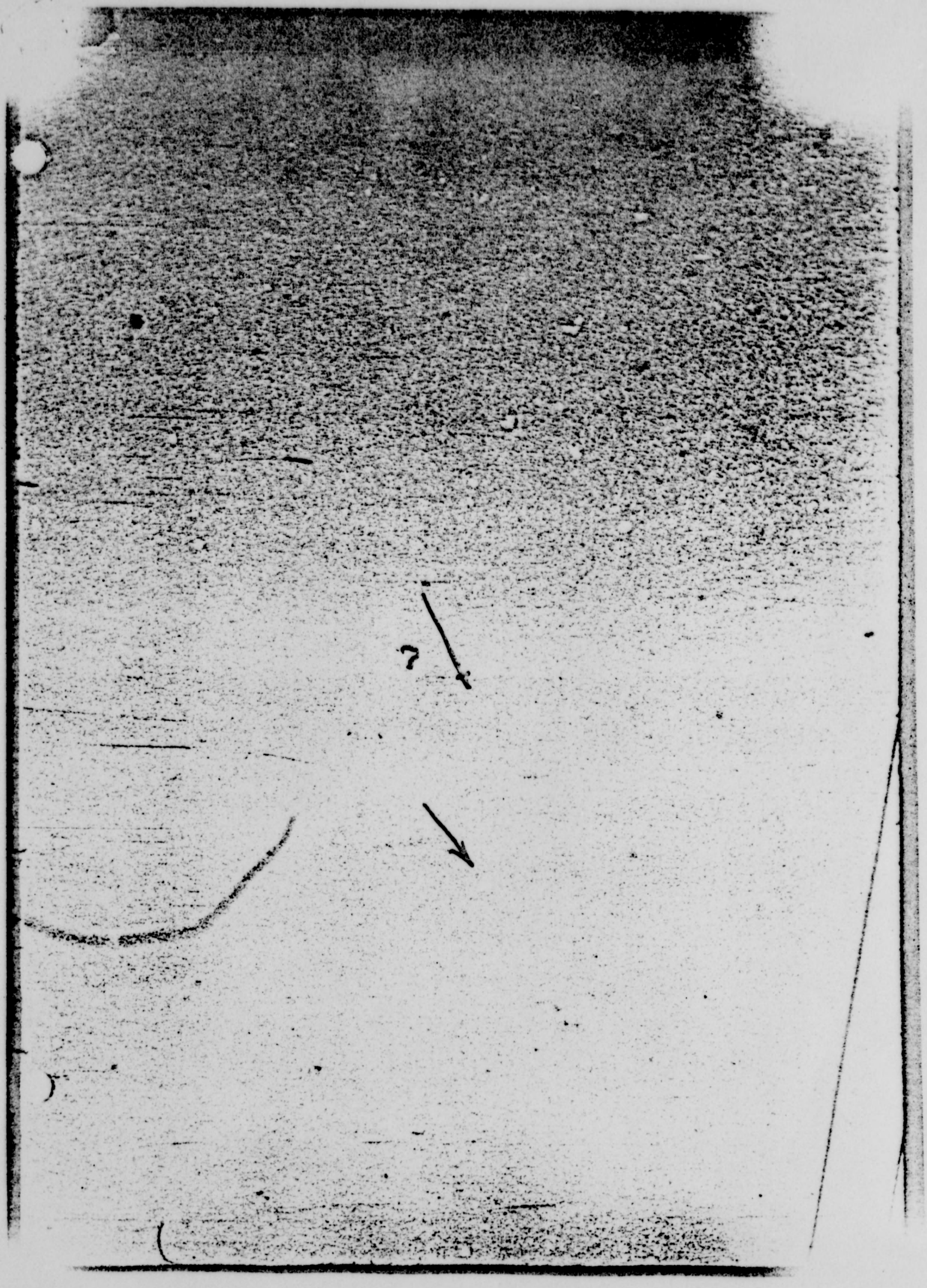
Evolution — Aircraft

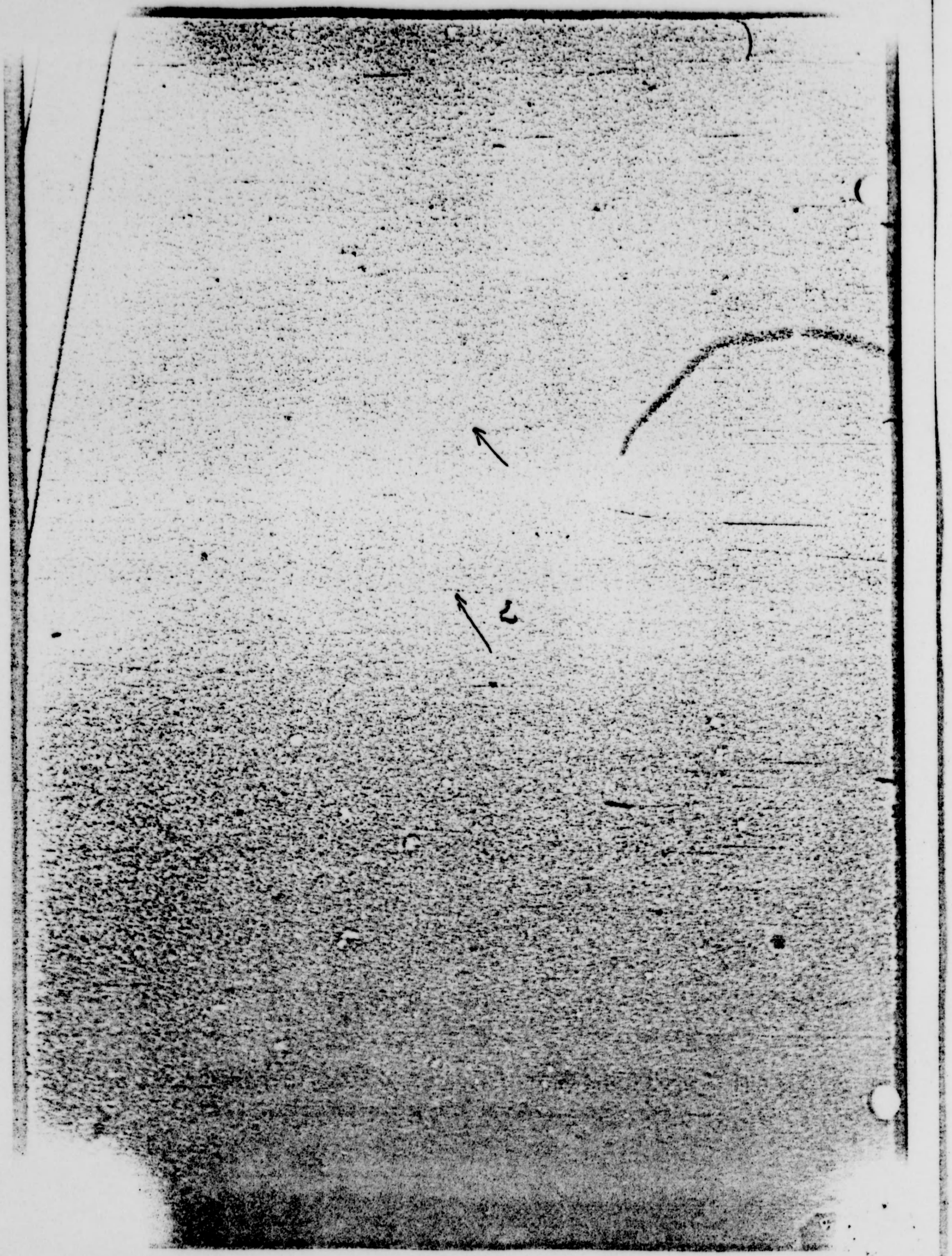
Taken by: Mr. [redacted]

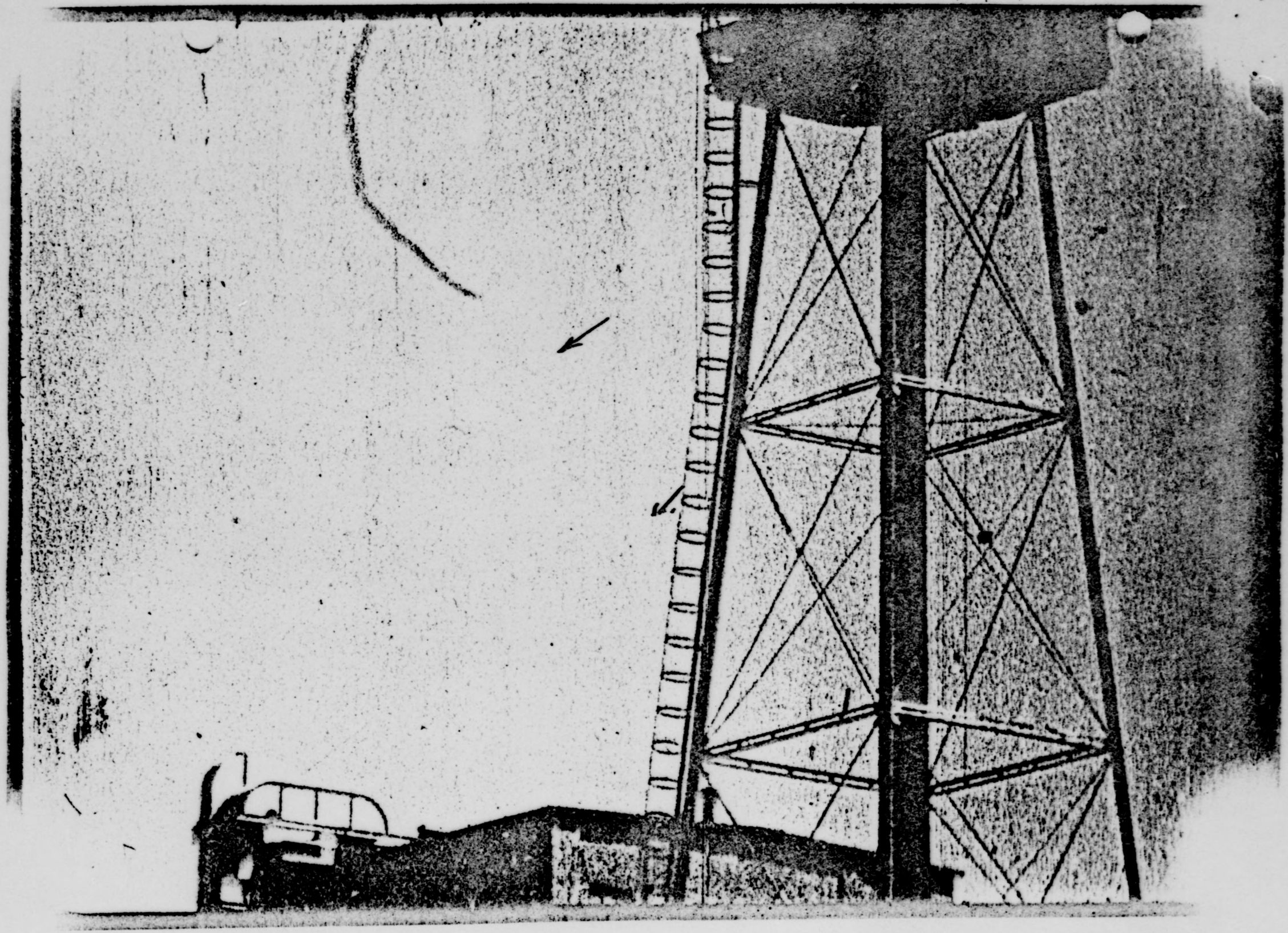
Great Falls, Montana











JOINT MESSAGEFORM

COMMUNICATIONS CENTER NO.

UNCLASSIFIED

SPACE ABOVE FOR COMMUNICATIONS CENTER ONLY

FROM: (Originator)

CG ATIC

TO: CO 1701ST AIR TRANSPORT WING
GREAT FALLS MONTANA

INFO: D/I HQ USAF WASH D C AFOIN-2A2

DATE-TIME GROUP 1718302 DEC 52	[redacted]
PRECEDENCE FOR:	ACTION ROUTINE / INFORMATION ROUTINE
☐ BOOK MESSAGE	☒ ORIGINAL MESSAGE
☐ MULTIPLE ADDRESS	CRYPTOPRECAUTION ☐ YES ☒ NO
REFERS TO MESSAGE:	
IDENTIFICATION	CLASSIFICATION

FROM: AFOIN-ATIAA-12-10-E FOR WING INTELLIGENCE OFFICER

Reference previous correspondence from Hq USAF-AFOIN-2A2 regarding movies taken by Mr. [redacted] on 15 Aug 50. Will give brief background for your information. On 15 Aug 50, [redacted] took movies from a baseball stadium of two objects. Movie shows two bright silver, indistinct objects passing a water tower. The incident was reported to the Air Force and he was interrogated. Interrogation probably by OSI. Movies and interrogation were forwarded to this Center and evaluated as being two F-94 aircraft. Case was closed and file on the incident was not retained. Since then new evidence has come up and ATIC has been requested to re-evaluate the sighting. Request that if possible you re-interrogate [redacted] on details of sighting and air mail to ATIC. Details desired are: (1) How he first observed the object? (2) How far he had to go to get his movie camera? (3) How long they were in view? (4) Angle of azimuth and elevation when first observed, same as objects

ROUTING

JOINT MESSAGEFORM

COMMUNICATIONS CENTER NO.

UNCLASSIFIED

UNCLASSIFIED

SPACE ABOVE FOR COMMUNICATIONS CENTER ONLY

FROM: (Originator)

CG ATIC

DATE-TIME GROUP
171330Z DEC 52

SECURITY C[redacted]

PRECEDENCE FOR: | ACTION | INFORMATION

☐ BOOK MESSAGE

☐ ORIGINAL MESSAGE

☐ MULTIPLE ADDRESS

CRYPTOPRECAUTION ☐ YES ☐ NO

REFERS TO MESSAGE:

IDENTIFICATION | CLASSIFICATION

TO:

INFO:

UNCLASSIFIED

passed the water tower, and same when objects disappeared. Accurate azimuth and elevation can be obtained by noting points the objects passed by the water tower. If aerial photos of Great Falls that show the baseball stadium and the airfield are available draw in the azimuth angles and apparent flight path of objects. If no aerial photos are available, make an accurate sketch, showing scale, of the area. If it appears, from the description of the objects path, that the objects could have been a F-94 aircraft in the traffic pattern, sketch in the probable traffic pattern. (5) Personal opinion as to [redacted] character, motives, reliability, etc. (6) Any additional comments on the incident. In addition request you contact local OSI and determine whether or not they have a copy of the original report or where one can be obtained. Desire both your interrogation and original to use as cross check. Realize this is a large order for old information but data is needed. Advise by wire whether or not above data can be obtained and when it can be expected.

In reply refer to Project Blue Book.

COORDINATION:

ATIAA _____ UNCLASSIFIED

ATIA

UNCLASSIFIED

SECU[redacted] PAGE 2 OF 2 PAGES

DRAFTER'S NAME (and signature, when required)

CAPT E.J. RUPPELT/vs

RELEASING OFFICER'S SIGNATURE

SYMBOL
ATIAA-5

TELEPHONE
65365

OFFICIAL TITLE ROBERT E. KENNEDY, MAJOR, USAF
AIR ADJUTANT GENERAL

DD FORM 1 MAY 49 173 REPLACES WD AGO FORM 11-168, 15 JUN 1945, AND WD AGO FORM 0990, 1 APR 1946, WHICH MAY BE USED.

16—58923-2 ☆ U. S. GOVERNMENT PRINTING OFFICE : 1950—O-875946

[redacted]

24 DEC 1952 02 32 Z

UNCLASSIFIED

RD029WPE624

XYC029

CXB244

JWPQG 7

RR JEDWP

DE JWPQG 14C

R 252135Z ZNJ

FM CO 1701 AT WG GREAT FALLS AFB MONT —

TO JEDWP/CG ATIC WRIGHT PATTERSON AFB OHIO —

INFO JEPHQ/D/I HQ USAF WASHDC

[redacted]/GFOIN-12-2250 REF PROJECT BLUE BOOK. REQ DELAY

REGARDING INTERROGATION OF [redacted] PROJECT OFF ON GOOD TERMS [redacted]

ON LV DUE TO RTRN 31 DEC 52 PD OSI CONTACTED STATES [redacted] INTERVIEWED

BUT NO STATMENT OBTAINED. EXPECT REPLY BEFORE 7 JAN 53.

24/0138Z DEC JWPQG

[redacted]

UNCLASSIFIED

ROUTING

JOINT MESSAGEFORM

COMMUNICATIONS CENTER NO.

UNCLASSIFIED

SPACE ABOVE FOR COMMUNICATIONS CENTER ONLY

FROM: (Originator)

CG ATIC

TO: CO 1701 AT WG GREAT FALLS AFB MONT

INFO:

DATE-TIME GROUP	SECU[redacted]
3119002 DEC 52	

PRECEDENCE FOR:	ACTION	INFORMATION
	ROUTINE	

☐ BOOK MESSAGE ☐ ORIGINAL MESSAGE

☐ MULTIPLE ADDRESS CRYPTOPRECAUTION ☐ YES ☑ NO

REFERS TO MESSAGE:

IDENTIFICATION	CLASSIFICATION
GFOIM-12-2250	[redacted]

UNCLASSIFIED

FTDM: AFOIN-ATIAA-12-12-3

Reference your message GFOIM-12-2250. Delay you requested in obtaining information on [redacted] is all right. Would like to have it as soon as possible.

COORDINATION:

ATIAA _____

ATIA _____

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DECLASSIFIED AFTER 12 YEARS.
DOD DIR 5200.10

UNCLASSIFIED

SECU[redacted] PAGE 1 OF 1 PAGES

DRAFTER'S NAME (and signature, when required)	RELEASING OFFICER'S SIGNATURE
CAPT E.J. RUPPELT/vs	

SYMBOL	TELEPHONE	OFFICIAL TITLE
ATIAA-5	65365	ROBERT L. KEMMER, MAJOR, USAF AIR ADJUTANT GENERAL

AGO FORM 173 1 MAY 49 REPLACES WD AGO FORM 11-168, 15 JUN 1945, AND WD AGO FORM 0990, 1 APR 1946, WHICH MAY BE USED.

16—58923-2 ☆ U. S. GOVERNMENT PRINTING OFFICE : 1950—O-875946

[redacted]

UNCLASSIFIED

Unconvential Aircraft

5D CSI
Attn: Lt Col James F. X. O'Connel, District Commander

MCIAXa-1b

1

In accordance with your request for advice as to the disposition of the data received on the incident at Great Falls, Montana, it is advised that this Department considers the matter closed. A detailed examination of the film received through your office revealed that it was too dark to identify any phenomena which could be studied and possibly analyzed. Still photos were also made from this film and these were also too dark to permit any analysis.

HAROLD E. WATSON
Colonel, USAF
Chief, Intelligence Department

JJR/rma
6-5376
D-2650
D-711

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full
ey

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DOD DIR 5200.10

UNCLASSIFIED

[redacted]

UNCLASSIFIED

[redacted]

HEADQUARTERS
1701ST AIR TRANSPORT WING
CONTINENTAL DIVISION, MATS
GREAT FALLS AIR FORCE BASE, MONTANA

9 January 1953

SUBJECT: Project Blue Book

TO: Commanding General
Air Technical Intelligence Center
Wright-Patterson Air Force Base, Ohio

1. In compliance with your message AFOIN-ATIIA-12-10-Z, dated 22 December 1952, Mr. [redacted] was interrogated by Lt. Peter Marquez, Wing Operations and Training Office, this station.

2. Mr. [redacted]s version of the incident is as follows:

On about the 5th or 15th of August 1950, I, as manager of the Electrics, a local baseball team, walked to the grandstand of the local stadium here in Great Falls, Montana. It was approximately 1130 AM and my purpose was to check the direction of the wind in preparation for the afternoon's game.

Looking toward the smoke stack to see in which direction the wind was blowing the smoke, I saw two saucer shaped, very bright objects completely motionless and in direct line with the smoke stack. I was of the opinion that they were aircraft, but after a few seconds of a still motionless view, I decided that they could not be aircraft. I immediately ran to my car, which was parked adjacent to the stadium (approximately 50 Ft.) to get my movie camera. At the same time I shouted for my secretary, and her independent description of these two objects is identical to mine. At the time I thought there might have been a whistling noise, but of that I am not certain. There was no visible exhaust or fire and the objects seemed like two new dimes glistening in the sun. I did not take time to return to the exact spot from where I had originally noticed these objects. I prepared my camera and started taking pictures, from a point immediately adjacent to my car. By this time, approximately five or eight seconds had elapsed since I had run to my car. The two objects were again motionless, but at a point to the left of the smoke stack. It was at this point that I first filmed these two objects. I repeat, they were not covering any distance; that is, they were motionless, but an occasional vibration seemed to momentarily tilt them, after which they would instantly correct their level plane to its seemingly balanced position. The two objects made an abrupt flight in an

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[redacted]

C29

[redacted]

UNCLASSIFIED

Hq, 1701st Air Transport Wg, Great Falls AFB, Montana, Subj: Project Blue Book

arc motion at very high speeds. I approximate the speed to have been over 400 MPH. At all times the altitude was definitely in the 5,000 ft. to 10,000 ft. above the terrain bracket. The end frames of the movie reel show the objects to be in line with a high water tower, which is approximately 130 ft. high. I approximate a 30° angle to have been formed by the level ground and a straight line from the objects to the spot where I was standing. At the point above the water tower, the objects hovered motionless for two or three minutes and then flew out of sight, The clearest films of the reel were removed by the Air Force when I first lent them the movies. The only ones which remain in my possession are those which show the objects at a considerable distance. I believe the objects were at all times within 2 or 2½ miles of me. Total time that the objects were in view: approximately 3½ minutes.

3. Sketch #1 shows the point from which Mr. [redacted] first sighted the objects. It is approximately the same spot from which he took the film. The extreme ends of the Great Falls AFB runway are indicated for evaluation as to flight traffic pattern.

4. Sketch #2 used as the center the exact spot from where original sightings were made. The spot adjacent to his parked automobile is also indicated. It was here that the film was taken.

5. It is reported by hearsay that other individuals observed these objects at the same hour on the same day. However, due to elapsed time since these sightings, no concrete leads can be found to identify other witnesses.

6. Mr. [redacted] is the manager of th[redacted] He has a [redacted] quent, if not daily, co[redacted] Shortly after the incident, [redacted] denounced all who claimed to have seen "flying objects". Particular reference was made to Mr. [redacted]a. This bad publicity resulted in the loss as sponsors on nine (9) of the fourteen (14) radio stations for Mr. [redacted]s sportcasts. It was nine (9) months before these stations returned to Mr. [redacted]a's program and this doubtlessly resulted in considerable financial loss to him. At present, Mr. [redacted] is in the final stages of a lawsuit against Mr. [redacted]e.

7. Mr. [redacted] is well-known as a pleasant, friendly, courteous and competent individual. There seem to be no ulterior motives involved.

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[redacted]

UNCLASSIFIED

[redacted]

UNCLASSIFIED

Hq, 1701st Air Transport Wg, Great Falls AFB, Montana, Subj: Project Blue Book

Publicity is probably the only benefit he could have derived but, well-known as he is, publicity is no problem for him. Conversation with a local physician and an assistant district attorney disclosed no derogatory information. Mr. [redacted] is well accepted and highly regarded in the community.

8. OSI was contacted. They have knowledge of the incident but no copies of the interrogation; nor do they believe any could be found other than those originally forwarded with the film in 1950.

9. Personal opinion expressed by interrogator: "This is the third or fourth time I have interviewed Mr. [redacted] on this subject. At all times he was polite and consistent. His only complaint against the Air Force is that several frames (about 35% of the total) were removed when the film was originally lent the Air Force. Despite this, he has been most cooperative and all his reports on the matter appear to be honest and sincere beliefs."

FOR THE COMMANDING OFFICER:

for Lloyd E. Wood

RAYMOND L. KOLMAN
Major, USAF
Director, Opr & Tng

2 Incls:
1. Sketch #1
2. Sketch #2

Just so! Untrue!
See Punch
action msgs
on self sealer
of file.

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DECLASSIFIED AFTER 12 YEARS.
DOD DIR 5200.10

[redacted]

UNCLASSIFIED

OFFICIAL FILE
464
OFFICE OF RECORD

MAY 4 1956

Mr. A. M. Rochlen
Vice President - Public Relations
Douglas Aircraft Company, Inc.
Santa Monica, California

Dear Mr. Rochlen:

This office is in receipt of the extremely able analysis performed by the Douglas Aircraft Company on the film of an unidentified flying object photographed by Mr. [redacted]a in August 1950, and interposes no objections to the release of this report, in whole or in part, to the Green-Rouse Studios.

We agree with the conclusions stated in the second paragraph of page 8 of your report. However, the statement attributed to Mr. [redacted] (3rd par., page 1) that a number of frames had been removed from the film while in the possession of the Air Force is without foundation. In fact, official Air Force files indicate that the film was in damaged condition when received, and that this was acknowledged by both Mr. [redacted] and the local Air Force representative. The Air Force requested Mr. [redacted]a permission to repair the film, advising him at the same time that a frame or two might be lost in the process. Mr. [redacted] wired permission the following day through the local Air Force representative.

We greatly appreciate you sending us your report, the conclusions of which will be reflected in the next release of the Air Force's "Bluebook" project report on UFOs. The previous release of this report "Analysis of Reports of Unidentified Aerial Objects" represented the critical analyses of all reports and sightings from 1947 to 1955. It includes the efforts of many highly competent scientists, analysts, investigators and specialists. Reports used were derived from all sources - ranging from well-known scientists and experienced pilots to the average man-on-the-street. This report is available for examination by the general public.

1 4E4 Engrg Files
2 4E4 Publ. Info. 45

As you may know, The Honorable Donald A. Quarles, Secretary of the Air Force, on the 25th of October 1955 publicly released the summary of this report. This summary stated that through the continuous use of the services of well-known scientists and by constantly improved analytical methods (your report for instance) as well as investigative methods, the Air Force has reduced the number of "unknowns" from approximately 10% in 1954 to 3% as of this date. The "unknowns" are, of course, the prime

AFOIN-4
AFOIN-4X2b
AFOIN-4X2a
AFOIN-4X3
AFOIN-4X4
AFOIN-4A
AFOIN-4B
AFOIN-4C
AFOIN-4D
AFOIN-4E
AFOIN-4F
OTHERS

PERM
TEMP
90 DAYS
INITIAL

ATIC FORM 144 (REV 20 FEB 56) ROUTING AND COORDINATION SHEET AF-WP-O-29 MAR 5[illegible] 35M

FIL
O' OPY

OFFICE OF RECORD

ORDINATION

-ING

AFOIN-4

Ltr to Mr. A. M. Rochlen, Santa Monica, California (Cont)

concern of the Air Force who will continue to investigate them regardless of how low this percentage may become. However, we wish to reiterate the conclusions of all these studies with regard to the "unknowns":

AFOIN-4X2b

1. There is total lack of evidence that the phenomena observed have inimical or hostile forces behind them.

AFOIN-4X2c

2. There is a total lack of evidence that they are interplanetary vehicles.

AFOIN-4X3

3. There is a total lack of evidence that they represent technological developments outside the range of present day scientific knowledge.

AFOIN-4X4

AFOIN-4A

4. There is a total lack of evidence that they constitute any threat to the security of our country.

We must apologize for the delay in replying to your letter; unfortunately, we did not receive it until the 26th of April.

AFOIN-4B

Sincerely,

AFOIN-4C

HAROLD E. WATSON
Brigadier General, USAF
Commander

AFOIN-4D

AFOIN-4E

AFOIN-4F

OTHERS

MAR 1 13 55 22 10:10

2

PERM	
TEMP	
90 DAYS	
INITIAL	

TIC FORM 144 (REV 20 FEB 56) ROUTING AND COORDINATION SHEET AF-WP-O-29 MAR 56 35M

The following is an outline of the procedures executed to obtain the finished product of 8 x 10 glossy paper photographic prints.

1. Original film was 16 mm motion picture Kodachrome film.

2. This film was enlarged in a Lietz Focomat Enlarger onto 4 x 5 Panchromatic cut film. This film was processed by normal methods in Eastman D-76 developer.

3. These 4 x 5 cut film negatives were then enlarged in a Omega D-2 Enlarger onto 8 x 10 projection printing paper.

The degree of enlargement in all cases is held constant. Development times for the intermediate negatives and the projection prints are held as constant as possible. The finished prints have a grainy appearance due to the extreme enlargement of the original 16 mm film. The mark at the left top of the print is the image of dirt in the film gate of the motion picture camera used to take the original photographs.

No details can be recognized on the images of the objects, i.e. no structure of any kind, no color fringes, no shape, even under a high power microscope. The images are uniformly round white dots, except a few which are oblong (frames 15, 17, 19 or 56, etc.), both objects parallel, probably as a result of camera motion blur. The sun is known to have been to the left of the photographer, at an elevation of about 55° and on an azimuth of 154° (confirmed by shadows on the film) *. There is no conclusive evidence that they were self-luminous sources because at no time were they seen against the prevailing sunlight.

Several additional pertinent pieces of information were learned from Mr. [redacted] in telephone conversations on March 17 and March 28, 1955, to wit: The Revere turret type camera was equipped with a telephoto lens of 3" focal length and operated at 16 frames/second. He noticed no surface wind to speak of at the time, possibly due to shielding by the bleachers, just a gentle breeze. He recalled that a wind sprang up later in the afternoon. An aerial photograph of the ball park showing the grain elevators and water tower in part was obtained (figure 2).

With the knowledge of the focal length and frame speed, the transverse component of the velocity of the objects can be correlated to their altitude and distance from the observer (for the objects at the start of filming). Assuming the azimuth heading to be 171° the total velocity can be similarly correlated. Since only angular distances from one station are available for measurement, the actual range at any one time cannot be determined.

If the objects' initial distance was (miles)	Their altitude was (ft. above observer)	Their transverse velocity was (mph)	Their total velocity was (assuming 171° heading) (mph)
1/4	320	18	19
1/2	640	35	36
1	1,280	69	74
2	2,160	138	150
3	3,800	200	220
4	5,100	280	300
5	6,400	345	370
10	12,800	690	740

Incidental information presently available comprises the following: Great Falls, Montana is situated on the upper Missouri River, just East of the Rocky Mountains at latitude 47° 30' and longitude 111° 18'. Altitude is 3312 feet.

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* Azimuth and altitude of the sun were computed utilizing references (1) and (2) listed at the end of this report.

jet aircraft based here at that time, so that if any were in the air, they would have been transients." That the bright photographed spots could have been the jet exhausts of the two aircraft seen from the rear has been suggested but this explanation is not convincing, the contrast against the blue sky being much greater than could be expected of jet exhaust under the film exposure conditions.

The objects left no observable trail and their tracking for 16 seconds and reported observation for about 50 seconds makes the assumption that they were two fragments of a shattered meteorite rather untenable *. Their shape, brightness, speed, almost precisely rectilinear path, steady motion, and separation cannot be reconciled with the supposition that they were birds †. These same facts together with the weather report also seem to rule out various forms of optical atmospheric mirages or cloud reflections (10).

It is apparent that the most possible natural phenomenon which could account for these film effects would be airplane reflections. There are, however, several factors which make such a hypothesis quite strained. First, it is not certain that there were jet planes or other aircraft flying in formation at this particular time and place. Second, the reflection from the moving planes must have persisted for at least 50 seconds (Mr. [redacted]a estimated that it took him 30 seconds or more after first observing the UFO's to run to his car, set the camera and start filming. His secretary,also at the scene, testifies that the objects remained in view throughout the period between the first sighting and filming.) It would require a very rare coincidence of airplane maneuver for reflections to persist this long. The possible parabolic flight paths of the airplanes which would result in such long persistent reflections are presented in figure 11. These parabolic flight paths completely abandon the 171° azimuth heading hypothesis. (The maximum speed (dive) of the F94 is 602 mph, landing speed is 130 mph, stalling speed is 108 mph.) ** Observed airplane reflections have lasted less than 20 seconds. Third, assuming a 171° azimuth heading, the orientation of the airplane and the sun is some 52° off in the horizontal direction and

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* Meteors seldom are visible for more than three seconds (4), (5). Some bright fireballs can be observed for up to six seconds but their orbit and angular velocity would no doubt be quite different. Their trails may persist up to 40 seconds (6).

† The speeds involved might possibly be compatible with those of birds. Birds with maximum wing spread of 3 to 4 feet might have been present in this region (7). Also it is noted that ducks and geese have maximum velocities from 55 to 60 mph (8). However, it is doubted if any birds would have flight characteristics as depicted on the film, e.g., if they were gliding, a more curving swooping motion would appear and if flapping, usually 5 to 13 strokes per second (cf. (9)), a more erratic path with great variations in luminosity would show. Finally, the UFO images are very different from those produced by birds at any distance.

** All of these paths are directed away from the Air Force Base but might conceivably be a section of a landing pattern. Note that all paths initially come closer to the observer giving a better opportunity for visual recognition of them as being jet planes.

42° off in the vertical direction from the optimal reflective angle. * (This means the flight path would have to be headed 26° more west and the plane rolled 21° for optimal reflection to be achieved.) An assumption implicit in this argument is that the objects were at optimal angle of reflection just as the first frame was taken. The optimum angle didn't occur later as no maximum of intensity is observed (just an approximate monotonic decrease in intensity, cf. figure 6). That the objects were first photographed just at their optimal reflective angle would be fortuitous indeed. Thus 52° represents the smallest angular discrepancy and in all likelihood this discrepancy in the horizontal was greater. The last two facts assume particular importance when it is noted that a typical airplane will reflect only when it is within 10° horizontally and 20° (dim reflection up to 45°) vertically of its optimal angle of reflection †. In fact, assuming that the objects kept a nearly rectilinear course, their brightest sun reflection should have occurred some 30° after they disappeared from view. Fourth, the distance of these hypothetical planes would probably have been over five miles; otherwise on this very clear day (visibility 60 miles) they could have been rather easily identified as planes on the film (at least on the last few frames where the bright flare was very small, cf. figure 10(c)) or by Mr. [redacted] or his secretary **. This distance, however, seems much too large when one considers the size and intensity of the images on the first few frames. Admittedly these images don't actually portray the real dimension of the reflecting surface (cf. appendix II) but they do give an indication of the relative magnitude of the size. This indication would roughly put the reflecting airplanes between one and three miles from the observer. The fifth consideration which strains the airplane hypothesis is the reported hovering of the UFO's. This might be accounted for by a flight path at a very great distance from the observer or one making a very small angle to the observer so that the traverse component of velocity would be small. The latter possibility is ruled out because of the sun's position relative to the plane and the former would necessitate an extreme decrease in the plane's distance in a very short period of time.

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* Optimal reflection is achieved when the angle of incidence of the sun's rays on the object is equal to the angle of reflection to the observer, the angles being taken with respect to the axis of the aircraft.

† These facts are confirmed with respect to the F94 jet and DC-6 airplane configurations. The discrepancy in the sun's angle of incidence vertically excludes reflection from vertical planar surfaces such as tail fins, etc. but still allows some partial reflection from the curved fuselage of the plane. These reflections are less intense and in the vertical plane may be observed up to about 45° from the optimal angle of reflection. On the other hand, reflections from the fuselage appear to completely disappear when the angle is off only 10° in the horizontal plane, cf. appendix II.

Note 1.2. reflection from the fuselage but possibly not from other surfaces

** At five miles a typical fifty foot airplane subtends angles of 7' by 2'. The resolving power of the eye is from 1' to 3' (12) while that of the camera set at f/22 is about 1 1/2' (its theoretical resolving power, exclusive of aberrations, is on the order of 40"), cf. figure 10(b) for the size of an airplane silhouette as it would appear on the scale of the film. These conclusions are borne out by the aircraft recognition silhouette card furnished by the Air Force to the Ground Observer Corps.

On the other hand, the photographs shown in Appendix II do seem to indicate that airplane reflections might possibly look like the images shown on the film. Of course, balloons, shiny insects etc. or for that matter any bright light source in the sky subtending a small angle would also give rise to such images. The fact that the images do fade is reminiscent of airplane reflective phenomena, although any non-isotropic or variable intensity radiative source could fade in like manner. The discrepancy in the azimuth heading for sun reflection might be decreased by large cross winds (they could conceivably reorient the plane's direction by about 6°) but the angular discrepancy still exists and along with the image size, remains a thorn in the side of the airplane reflection hypothesis.

The author acknowledges with regret that, despite the considerable amount of effort spent on the analysis of the evidence and circumstances of the "Montana UFO Case", no clearcut conclusion could be brought out. The indecision as to what these objects may have been must be ascribed to the conflict which remains between some details of the photographic material evidence and the uncertainty of some of the reported observations and witness accounts. Whether a better clarification of the recorded phenomenon could have been attained by a more searching investigation on the spot at the time, still remains difficult to assess.

3/24/56
R. M. L. Baker, Jr.

---

* This footnote applies to ** on page 5 of this report.

According to Ruppelt, cf. p. 287, ref. (14), "Both [redacted] and his secretary . . . had said that the two jets had appeared in another part of the sky only a minute or two after the two UFO's had disappeared in the southeast. This in itself would eliminate the jets as candidates for the UFO . . . . . We knew the landing pattern that was being used on the day of the sighting, and we knew when the two F94's landed. The two jets just weren't anywhere close to where the two UFO's had been."

APPENDIX I

Let us define the following quantities:

A = altitude of the objects above the observer - arbitrary units.

h = altitude of the objects (the midpoint of their line of centers) above the horizon. in degrees.

L = distance between the objects - arbitrary units.

R = distance of the objects from the observer - arbitrary units.

T = time measured after initial observation in seconds.

V = velocity of the objects - arbitrary units.

α = azimuth of line of sight between the observer and center point of the objects.

$\beta \triangleq \gamma' + \delta$.

γ' = angle between the line of centers of the objects and their direction of motion.

δ = angle between the perpendicular to the line of sight and the object's path.

Δ = azimuth of direction of the object's path (heading).

ϕ = angle between the initial line of sight and the line of sight at time T in radians or degrees.

θ = angle subtended by the apparent separation of the two objects - radians.

The zero subscript refers to the value of the quantity at the time of initial observation. Note that the initial separation may be "measured" before the initial elevation and azimuth since background objects (by which height and azimuth may be referenced) do not appear until frame #65.

Let us assume β, δ, γ', A, L and V to remain constant during the entire period of observation, i.e. constant configuration rectilinear motion. We denote this constant value by a zero subscript.

For simplicity we define the following dimensionless quantities.

$$r \triangleq R/R_o$$

$$a_o \triangleq A_o/R_o$$

$$t \triangleq V_oT/R_o$$

$$\ell_o \triangleq L_o/R_o$$

Consideration of figure 7 and application of the law of cosines together with trigonometric manipulation yields:

$$\tan h = \frac{\tan h_o}{\sqrt{1 + 2\,t \sin \delta_o + t^2}} \qquad (1)$$

$$\cos \phi = \frac{1 + t \sin \delta_o}{\sqrt{1 + 2\,t \sin \delta_o + t^2}} \qquad (2)$$

$$\frac{\theta_o}{\theta} \cong \frac{1 + 2\,t \sin \delta_o + t^2}{1 + t \sin \delta_o} \qquad (3)$$

In the example at hand the total elapsed time of observation is on the order of 16 seconds and the angular sweep of the objects across the sky (ϕ) is about 20°. Thus

$$0 \leq t < 0.3$$

Using equations (1), (2) and (3) the dashed lines depicting theoretical azimuth headings (figures 5a and 5b) are computed.

There does exist a random error (attributed to errors in measurement or to slight variations of the UFO's motion) about the theoretical 171° azimuth heading line of $\pm 5'$ in the case of the altitude and azimuth plot and ± 0.01 in the time vs. separation plot. This random scattering of experimental points could at most mask a variation in distance, altitude or separation of $\pm 1\%$. In particular, there is a slight variation in both plots (frames 120 to 175) towards the 169° azimuth heading. However, the general tendency of the points to maintain the same angular direction on the plot without an offset indicates that this slight variation doesn't represent a true change in direction, but rather a slight reorientation, slipping or curving motion of the objects. If a curving motion was responsible, the tangents to the curve would lie somewhere between 169° and 173° azimuth heading.

No plate (or rather frame) distortion correction formula has been applied to the UFO's coordinates as measured directly from the film. It is assumed that since the objects are near the center of the frame for most of the shots, any error due to distortion or emulsion shrinkage etc. would be much less than the standard deviation of ±5' and therefore would not effect the over-all accuracy of the results.

APPENDIX II

The image of any brilliant light source as seen by either the eye or a camera can appear much larger than the luminous object. An extreme example of this effect is shown in figure 8(a) which is a blown up 16 mm frame showing the image of a 1 1/4" plane mirror at 180 feet reflecting the sun directly into the 1" lens of a camera. The mirror's true size is exaggerated some 15 times. This fact has obvious bearing on the analysis of UFO films. It therefore motivated a photogrammetric experiment conducted by the author on December 10, 11, 1955. The experiment was devised in order to obtain empirical information on the effect of distance, lens focal length, iris stop, frame speed, etc. on the photographic images of various small bright sources of reflected sunlight (cf. figure 8(b)). One hundred and nineteen combinations of these parameters were examined. The tests included still, as well as 16 mm and 8 mm movie pictures and shots of actual airplane reflections also were taken.

The most pertinent facts gleaned from this experiment involved the analysis of optimal specular sun reflections * from a chrome plated Model DC-6 (cf. figure 8(c)) and a bright cylindrical reflector (cf. figure 9(a)). Both these objects show a magnification in the size of the image photographed over that of the actual object. Figure 8(c) shows a DC-6 model photographed from a distance that would give the same size picture as the full scale airplane from about two miles; the bright images are of dimension corresponding to 0.004 x 0.002 radians. * Figure 9(a) shows reflection (at optimal angle) from a cyclinder roughly corresponding in geometry to a fifty-foot airplane at a distance of about two miles, the bright image's angular diameter was 0.0015 radians. ** Figure 9(b) is a blown up frame taken from the Montana film. The image's angular diameter was 0.0014 radians. The UFO image intensity appears to be slightly less than that of the experimental picture but variation in development techniques would not allow quantitative analysis in this regard. Figure 9(c) shows optimal sun reflections from four jet planes; estimated distance was two and one half miles; the angular diameter of the bright image was 0.0014 x 0.0006 radians. The reflection from these jets lasted about 5^{o}. Figure 10(a) shows optimal reflection from a commercial plane (100 foot) in a landing pattern over the Los Angeles International Airport. Its estimated distance was 12 miles and the angular image diameter was 0.0003 radians. (The reflection in this case lasted about 10^{o}.

---

* Optimal reflection is achieved when the angle of incidence of the sun's rays on the object is equal to the angle of the reflection to the observer, the angles being taken with respect to the axis of the aircraft involved.

† All the shots were taken with a three inch telephoto lens, at 16 fps, f/22, and with Kodachrome daylight color film. Thus they should correlate with the actual Montana film.

** These frames show up rather poorly when reproduced. All measurements were made on the actual movie negatives.

In order to compare the UFO frames with a typical fifty foot airplane, silhouettes are included in figure 10(b). Figure 10(c) shows the UFO's just before they fade from view.

The experimental results appear to indicate that if the first few frames of the UFO film show sun reflections from airplanes which are optimally oriented with respect to the sun then the planes would have been on the order of one to three miles distant from the observer. If, however, these first few frames represent images of the reflection from airplanes not quite optimally oriented then the planes could have been at closer distance. Even in the light of the many sources of image distortion the experimental shots indicate that the image size of the UFO's could not be reconciled with airplane fuselage reflections at even four miles.

Airplane reflections have been observed both photographically and visually to persist (total angular distance from fade-in to fade-out) over angular travel ranges less than 20^{o} (40 moon diameters). This conclusion was borne out by manipulation of model airplanes (DC-6 and F-94) in strong sunlight.

The effects which accounted for the distortion in image size may be listed as follows: scattering in the atmosphere (between the light source and the camera) *, optical aberrations (coma, astigmatism, distortion), flaring at the lens surfaces, diffraction, turbidity in the film (sometimes called "photographic craspedomorphology"), reflections off the film backing (halation) and finally adjacency effects (chemical reactions between over-exposed and under-exposed areas usually produce firings called Makie line or Eberhard effect). There are also distortions produced during development and reprinting. An excellent description and analysis of all of the above effects is presented in reference (11).

All of these effects will cause, to a greater or lesser degree, the image on the film to appear larger than the source. * The stronger the light source, the more prominent these effects become. Curved reflecting surfaces become a much less intense source (cf. figures 9(a) and 9(c) and also have the property of not needing to be precisely oriented with respect to the sun in order to yield a bright image. Thus fuselage skin reflections aren't as bright as direct specular reflections but last over a greater angle. There is also quite a difference between specular sun reflections from fins, wings, planar windows etc. and those from the fuselage. Fins, wings and windows have more nearly planar surfaces and therefore produce more intense reflections, however, a very slight change in orientation with respect to the sun (1^{o} to 5^{o}) will completely destroy the reflections. Fuselage surfaces have greater curvature and thus produce less intense reflections but the angle of orientation is not quite as critical - e.g., 5^{o} to 10^{o} in the horizontal plane and sometimes up to 45^{o} in the vertical plane.

---

* Light sources brilliant enough to produce this form of large scale broadening are sufficiently intense to produce noticeable diffractions effects, cf. figure 8(a). The crosses of light appearing on the image are due to diffraction through the polygonal iris of the camera. This broadening is often called "aureole", cf. reference (13), p. 69.

† Attenuation of the light (e.g. associated with scattering, etc.) will tend to decrease many of the sources of broadening, however.

Because of the above described effects, the proportions of bright objects seen from a distance may also be distorted (cf. figure 9(a) where a cylinder of length to width ratio of 1:3 appears almost like a circular dot). In spite of this, fuselage reflections from planes appear to be slightly elongated, cf. figure 9(c). Of course, the amount of elongation depends upon the perspective of the observer and the distance of the object. In the case of the Montana films (the object's line of motion making an angle of 55° with the line of sight) the fact that the images appear as uniform white dots cannot serve as a valid deterrent to an airplane reflection hypothesis. * However, this rather large angle does mean that the image would be smaller and the hypothetical planes would have to be even closer than three miles. † In figure 9(c) the jet plane motion made an angle of only about 30° to 40° with the observer's line of sight and the image definitely appears oval.

---

* The slight oval appearance is due exclusively to movement of the camera as mentioned in the main report.

† Examination of figures 10(b) and 10(c) would indicate that airplanes as close as this would certainly appear on the film.

STATE OF MONTANA
REGISTERED
NO. 91 [illegible]
ED HENER
CIVIL ENGINEER AND
LAND SURVEYOR

N

Scale 1" = 100.0'
September 17, 1955.

1ST PHOTOGRAPHIC OBSERVATION

SUN'S AZIMUTH (11:30 AM)

Brick tank, Top elev. 170.0

Pole, To

Water to
Space be
Space be
Elevatio

Top elev. is 213.0

Grain tanks and buildings

Top elev. is 219.0

230.0

Top elev. is 212.0

Headhouse, Top elev. 229.0

GENERAL MILLS.

It was al
front of

Heron Engineering Company.

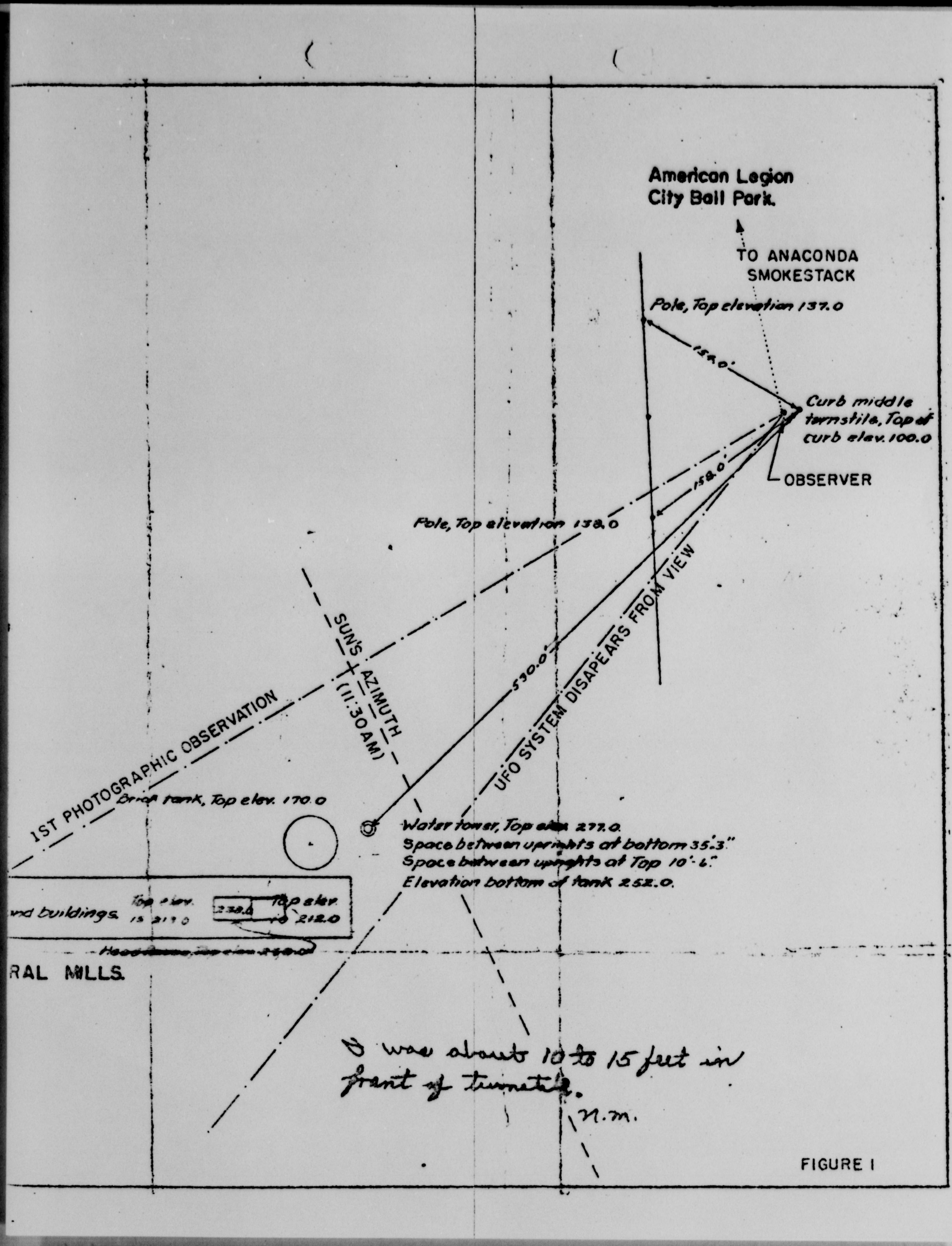

American Legion
City Ball Park.
TO ANACONDA
SMOKESTACK
Pole, Top elevation 137.0
154.0'
Curb middle
turnstile, Top of
curb elev. 100.0
158.0'
OBSERVER
Pole, Top elevation 138.0
530.0'
UFO SYSTEM DISAPEARS FROM VIEW
SUN'S AZIMUTH
(11:30 AM)
1ST PHOTOGRAPHIC OBSERVATION
Drink tank, Top elev. 170.0
Water tower, Top elev. 277.0.
Space between uprights at bottom 35'-3"
Space between uprights at Top 10'-6"
Elevation bottom of tank 252.0.
Top elev.
230.0
Top elev.
212.0
RAL MLLS.
O was about 10 to 15 feet in
front of turnstile.
N.m.

FIGURE 1

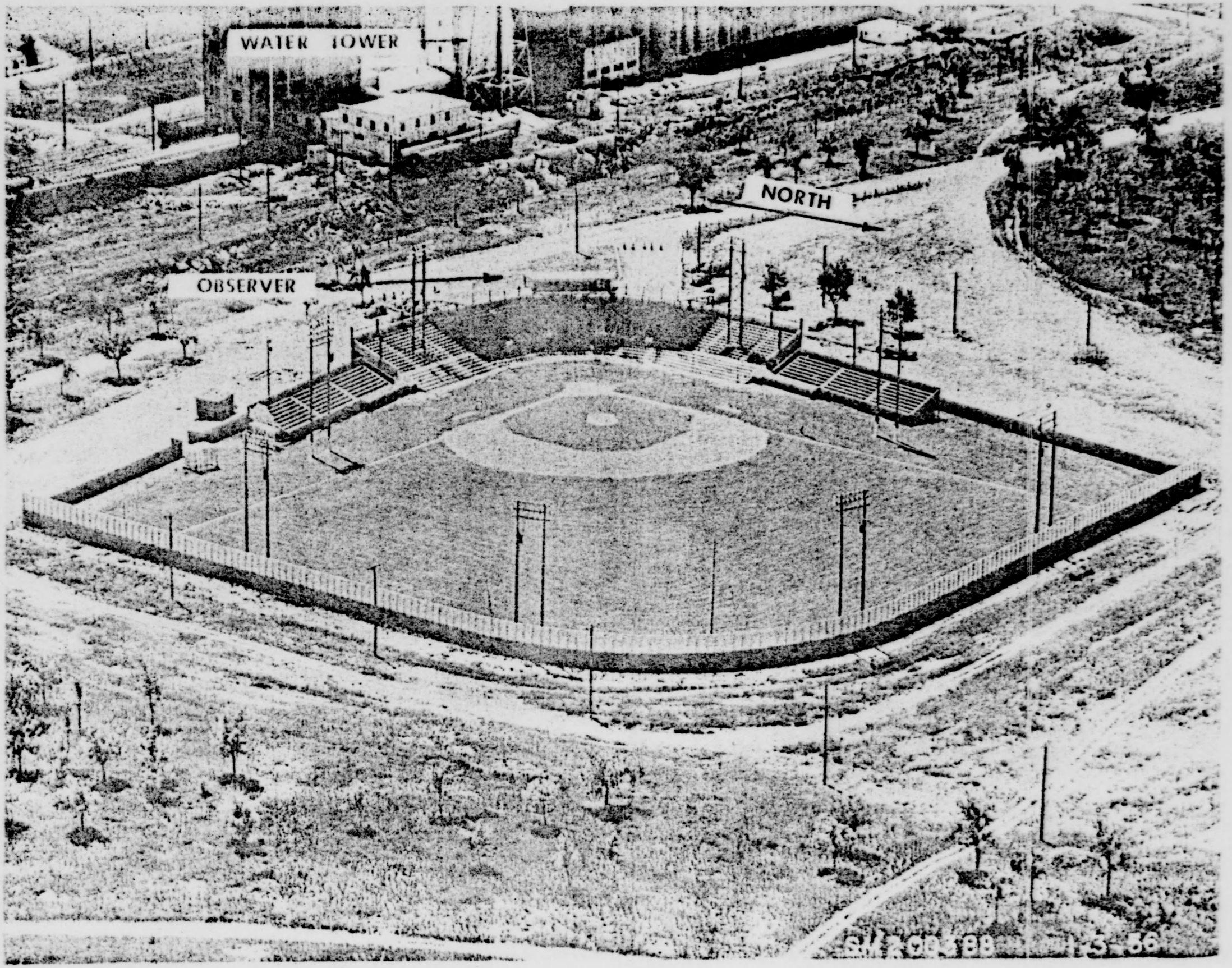
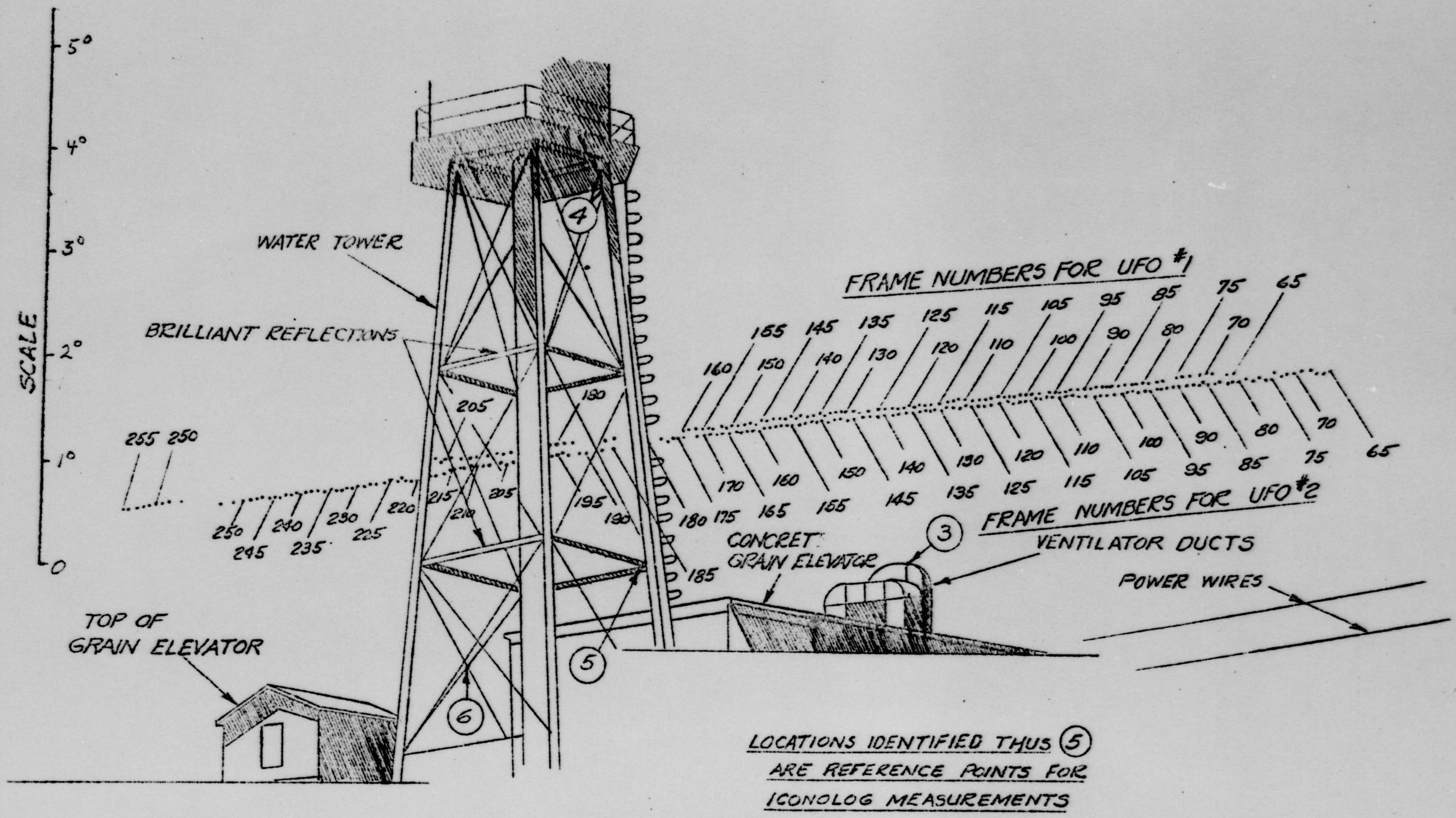


FIGURE 2



LOCATIONS IDENTIFIED THUS (5) ARE REFERENCE POINTS FOR ICONOLOG MEASUREMENTS

TRAVEL OF UNIDENTIFIED FLYING OBJECTS

(MONTANA FILM)

FIGURE 3

GREAT FALLS, MONT.

AND VICINITY

CITY ENGINEER'S OFFICE

SCALE

0 2600

APRIL 1, 1950

N

RIVER PARK

TRACTS

PARK

PARK HIGHWAY GARDEN TRACTS

SUN RIVER

PARK GARDEN TRACTS

MIDKIFF GREENACRE TRACTS

SUN RIVER PARK ADDITION

SUNSET ADDITION

GREAT NORTHERN

VILES ADDITION

SQUAW ISLAND

FAIR GROUNDS

ACREAGE TRACTS

NORTH TRACTS

GARDEN HOME TRACTS

GREAT FALLS MUNICIPAL AIRPORT

SUN

FIRST PHOTOGRAPHIC O

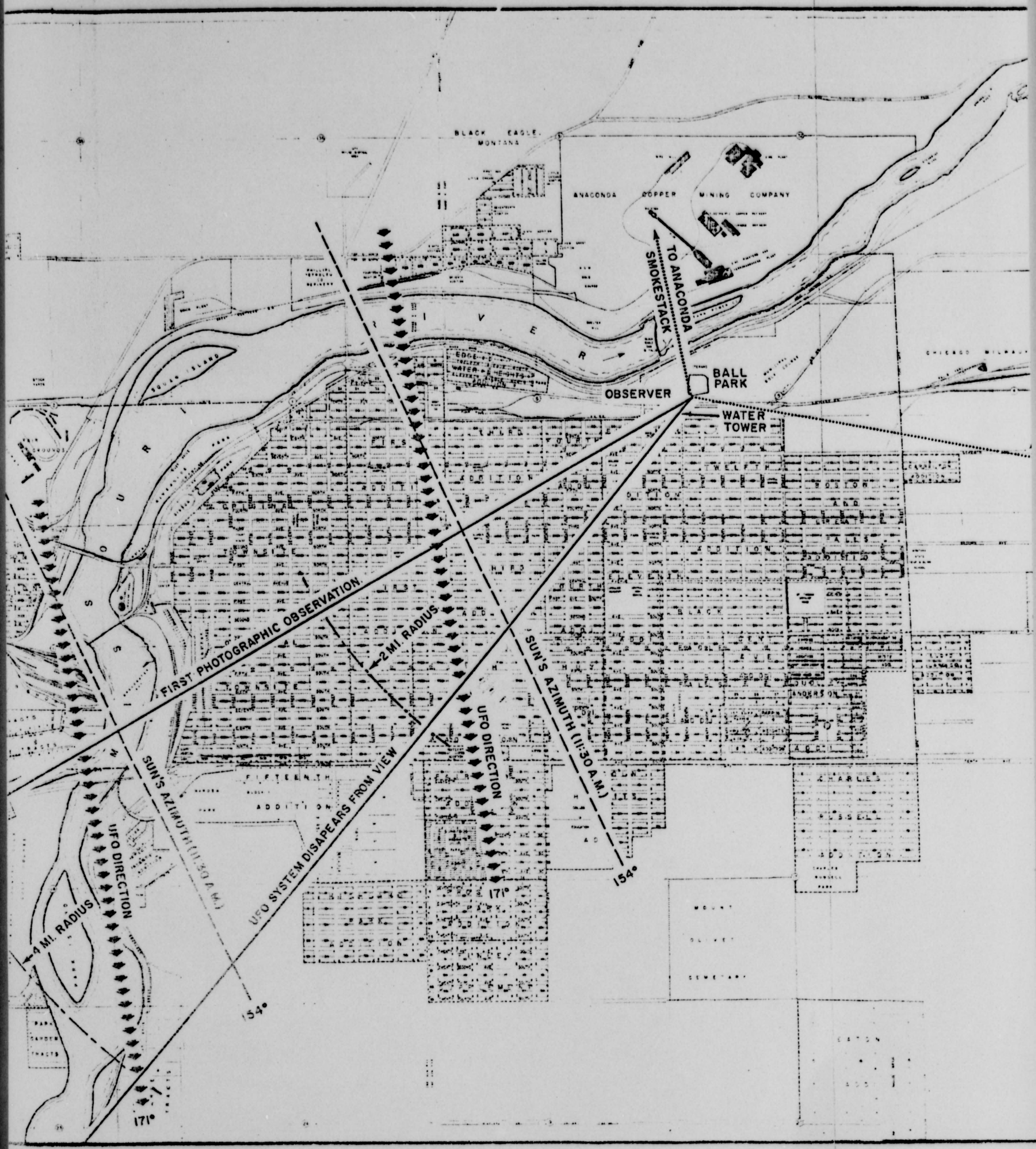
SUN'S AZIMUTH (11:30 A.M.)

UFO DIRECTION

4 MI. RADIUS

171°

154°


BLACK EAGLE
MONTANA
ANACONDA COPPER MINING COMPANY
TO ANACONDA SMOKESTACK
BALL PARK
OBSERVER
WATER TOWER
SOUTH
RIVER
SQUAW ISLAND
FIRST PHOTOGRAPHIC OBSERVATION
2 MI. RADIUS
SUN'S AZIMUTH (11:30 A.M.)
UFO DIRECTION
UFO SYSTEM DISAPEARS FROM VIEW
4 MI. RADIUS
154°
171°
TWELFTH ADDITION
BOSTON ADDITION
BLACK EAGLE ADDITION
ANDERSON ADDITION
RUSSELL ADDITION
FIFTEENTH ADDITION
MOUNT OLIVET CEMETARY
EATON ADDITION

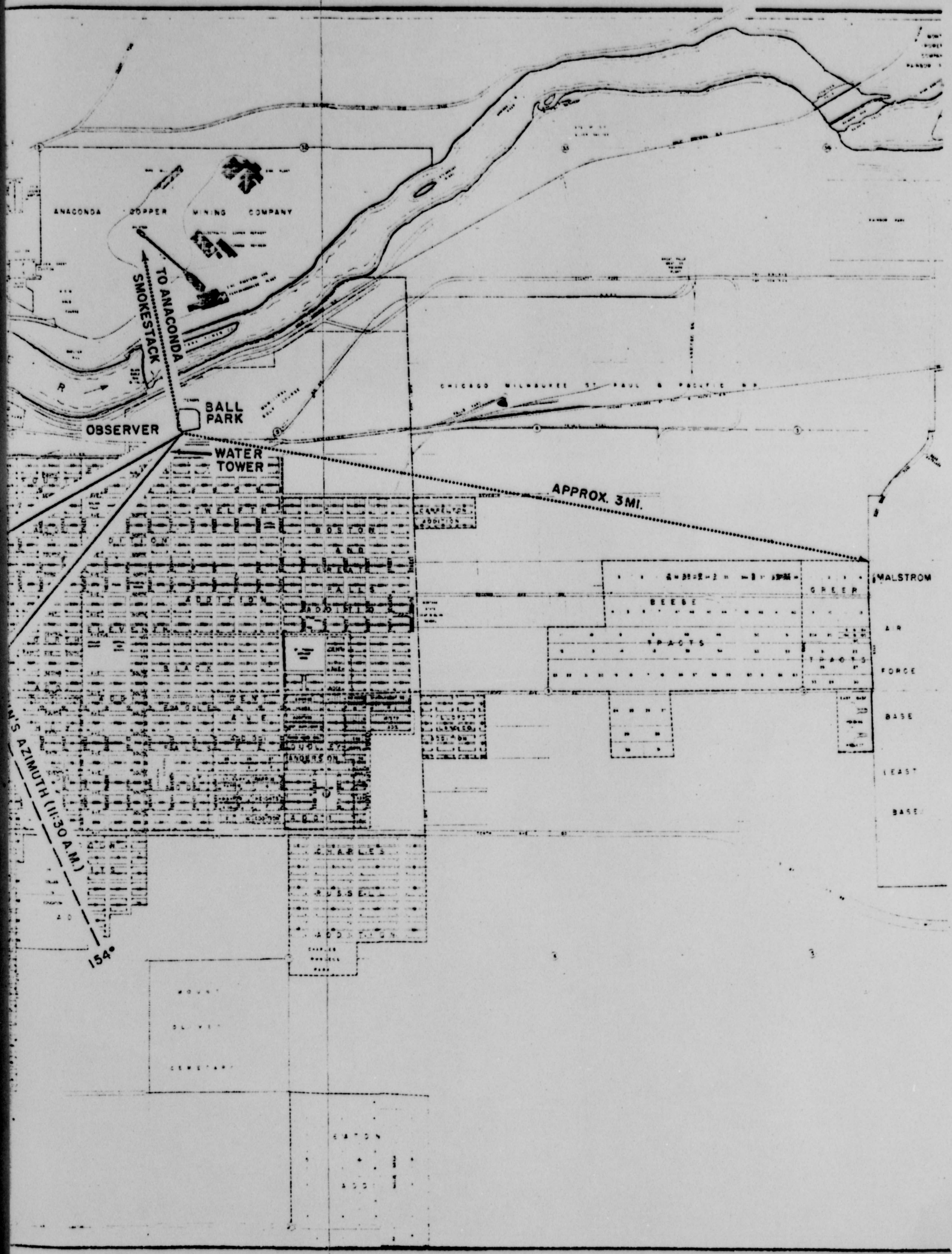

ANACONDA COPPER MINING COMPANY
TO ANACONDA SMOKESTACK
BALL PARK
OBSERVER
WATER TOWER
APPROX. 3MI.
CHICAGO MILWAUKEE ST PAUL & PACIFIC RR
MALSTROM
AIR
FORCE
BASE
EAST
BASE
BEEBE
GREER
TRACTS
TWELFTH
BOSTON
ADDITION
CHARLES
RUSSELL
ADDITION
EATON
ADDITION
ANDERSON
154°

FIGURE 4

FIGURE 5
MOTION OF UF

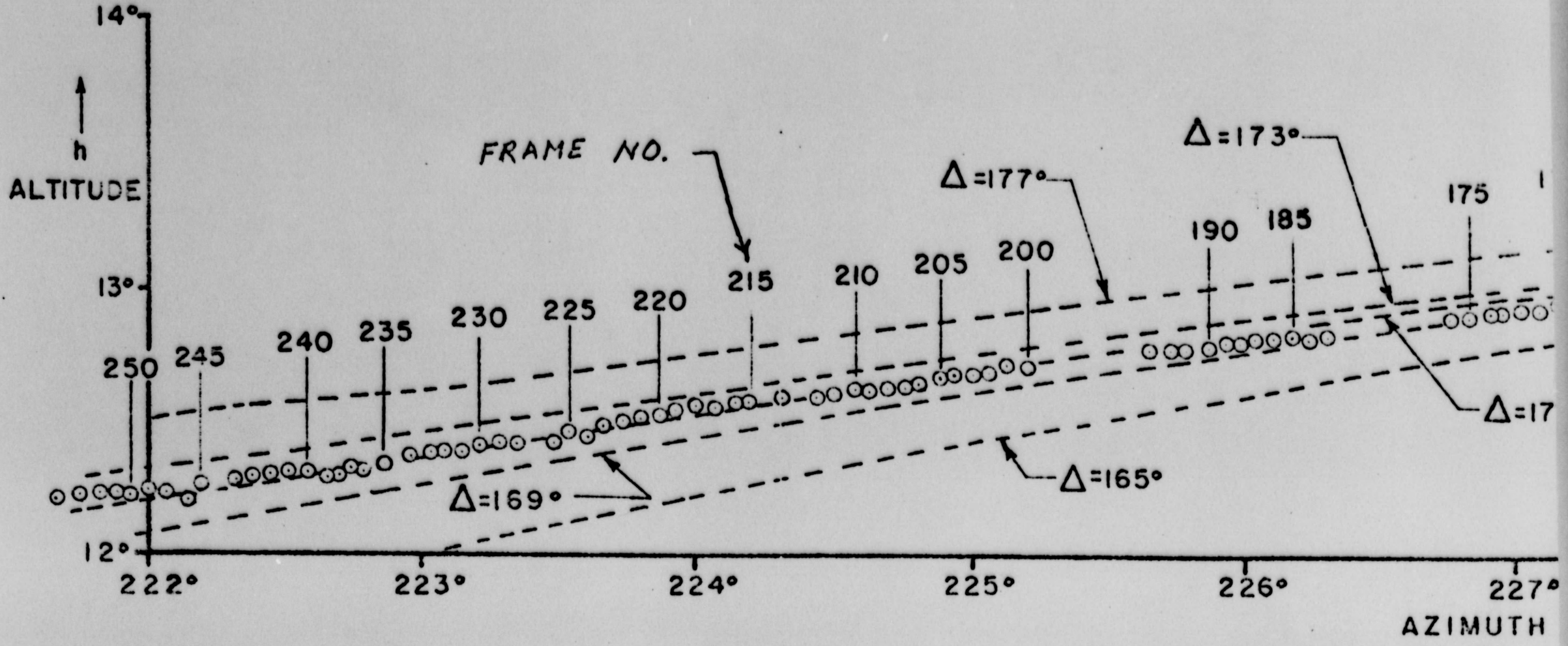
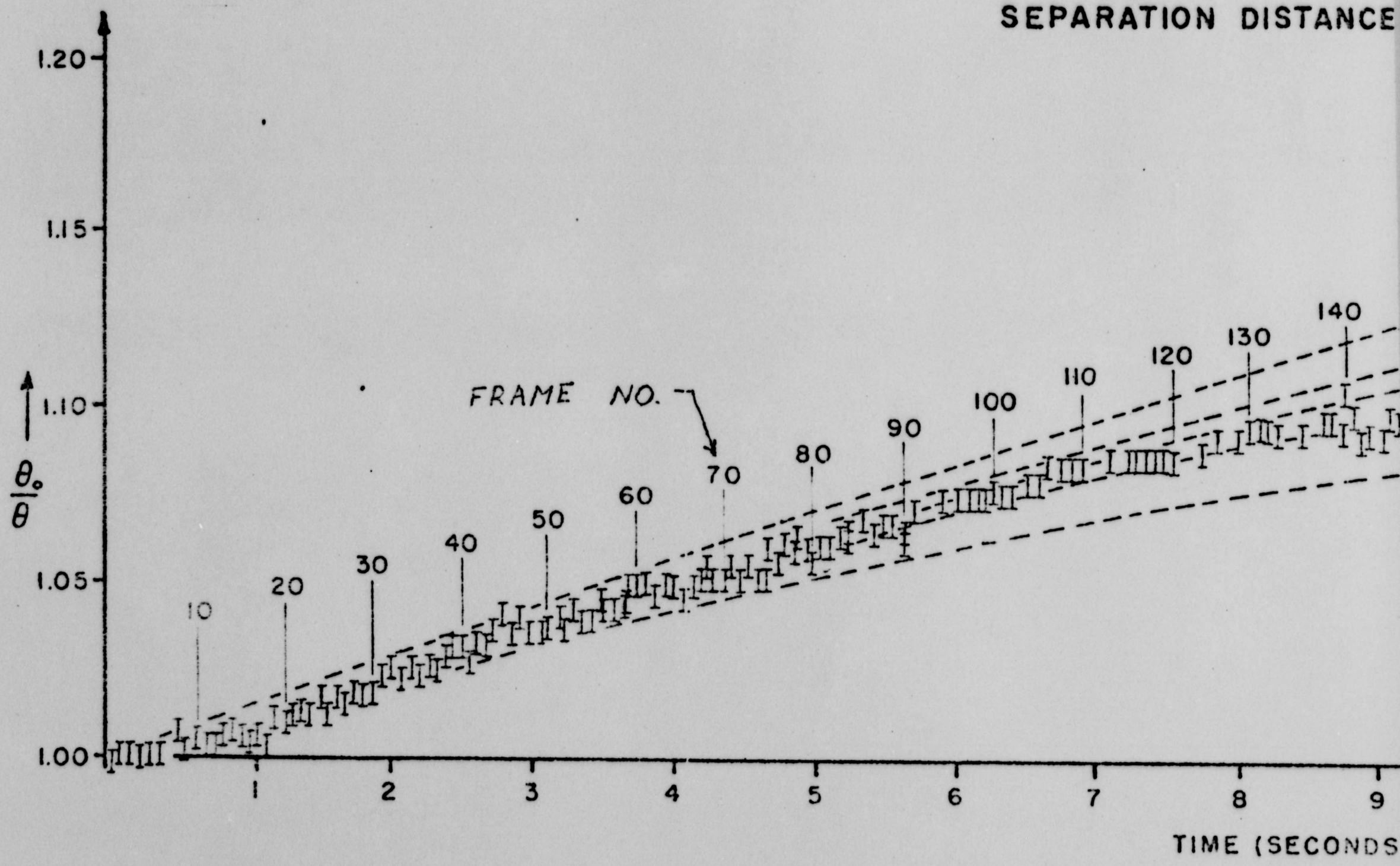
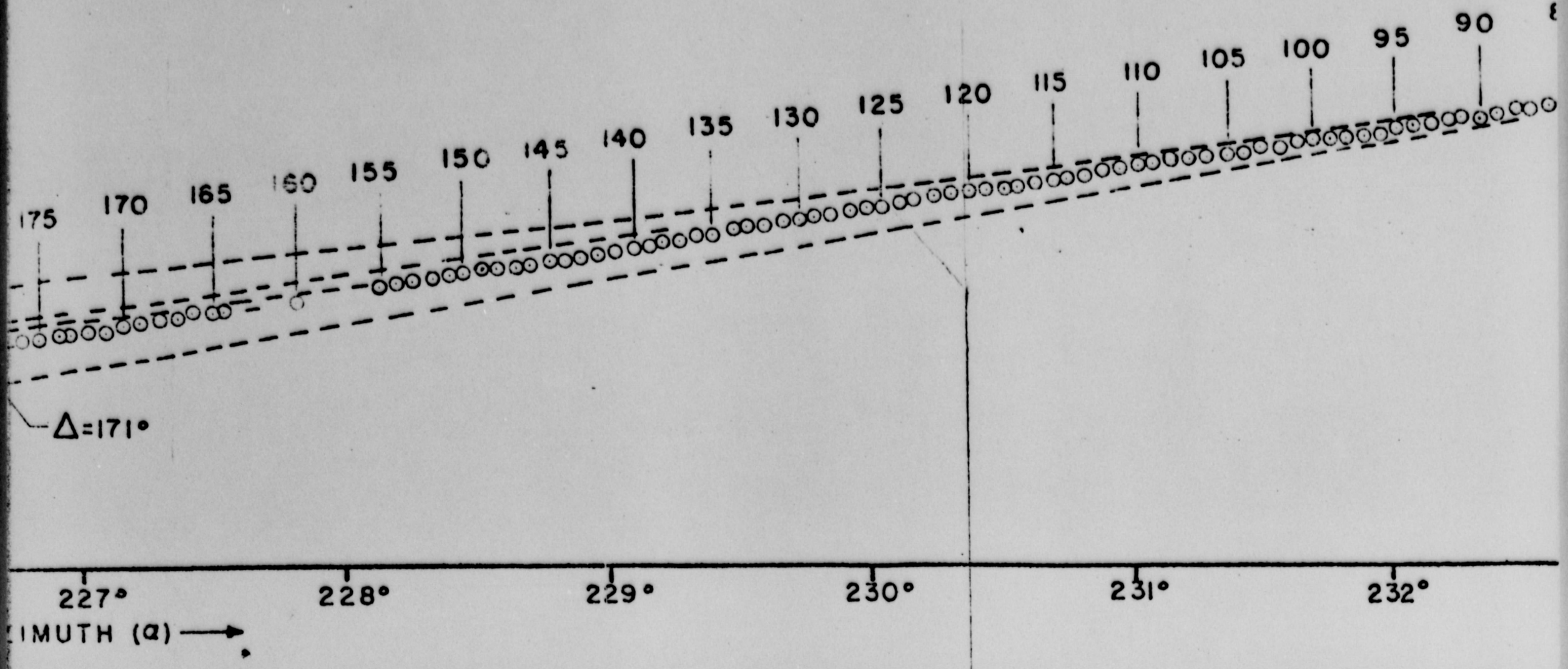


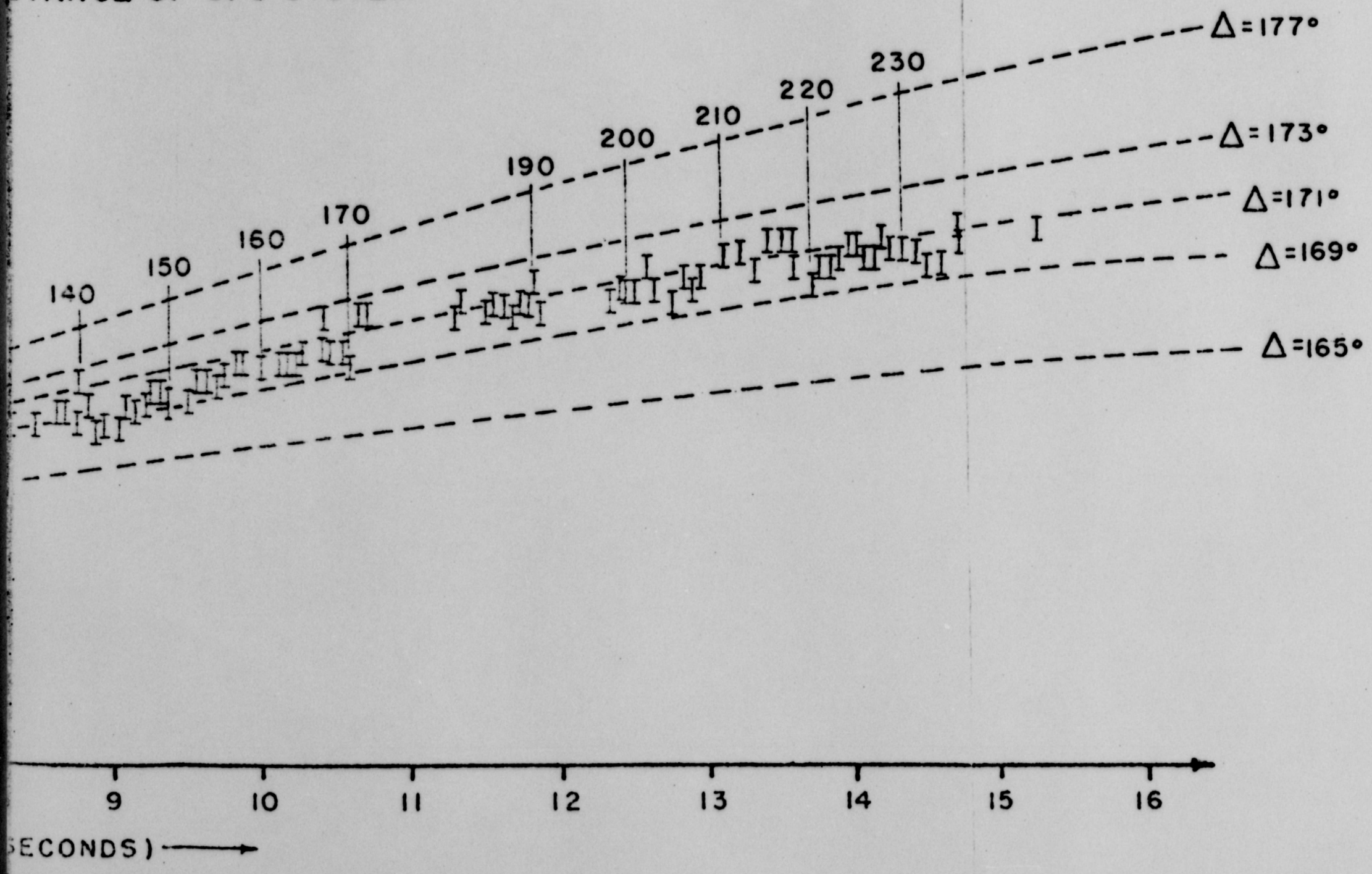
FIGURE 51
SEPARATION DISTANCE



URE 5a
F UFO SYSTEM



URE 5b
TANCE OF UFO SYSTEM



155 150 145 140 135 130 125 120 115 110 105 100 95 90 85 80

228° 229° 230° 231° 232° 233°

'STEM

Δ=177°

230 220 210 200 190 170

Δ=173°

Δ=171°

Δ=169°

Δ=165°

11 12 13 14 15 16

FORM 33 DB
REV. 7-48

Analysis

Prepared by Robert M. L. [illegible] Jr.

Date December 18, 1953

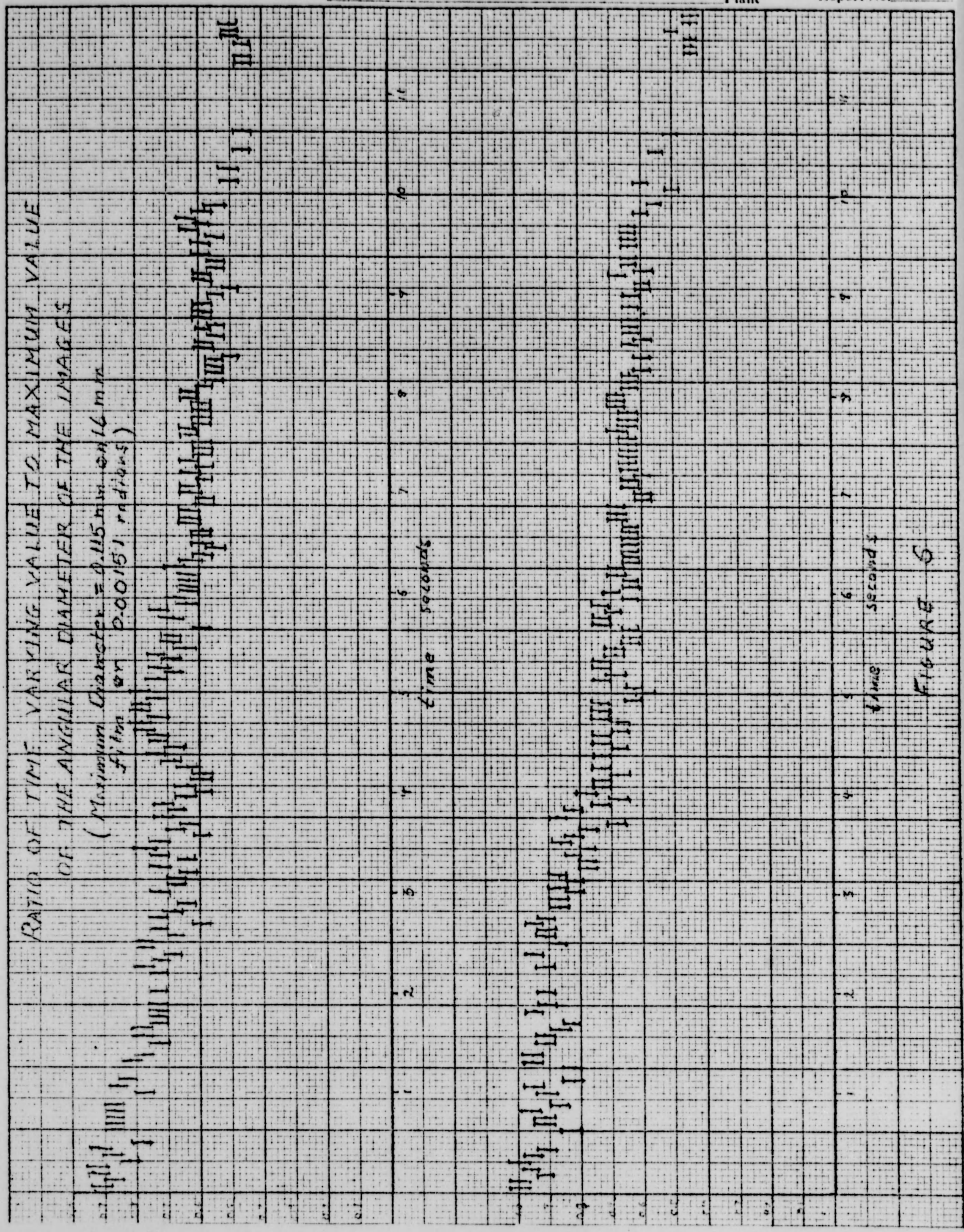
DOUGLAS AIRCRAFT COMPANY, INC.

Plant

Page

Model

Report No.



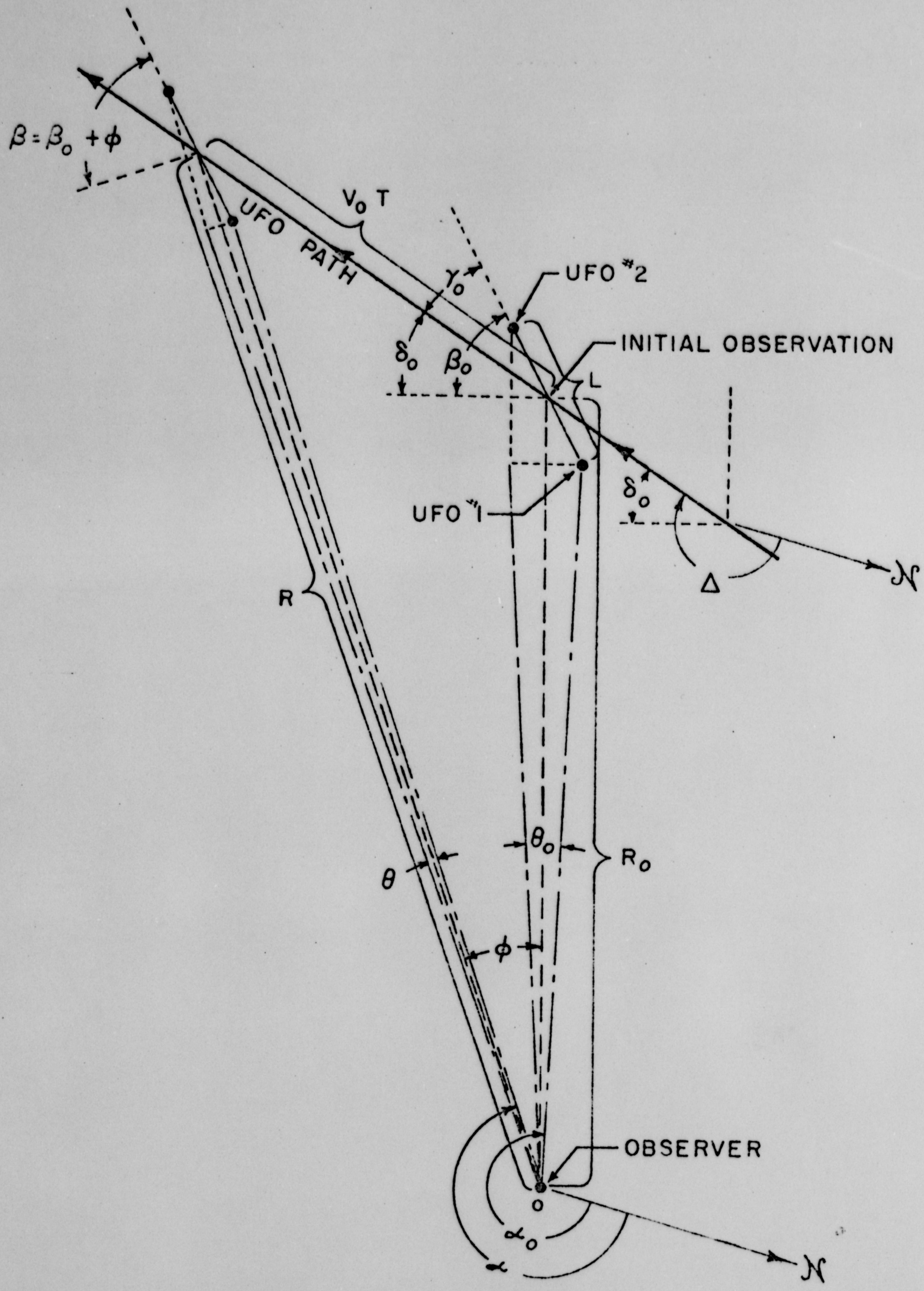
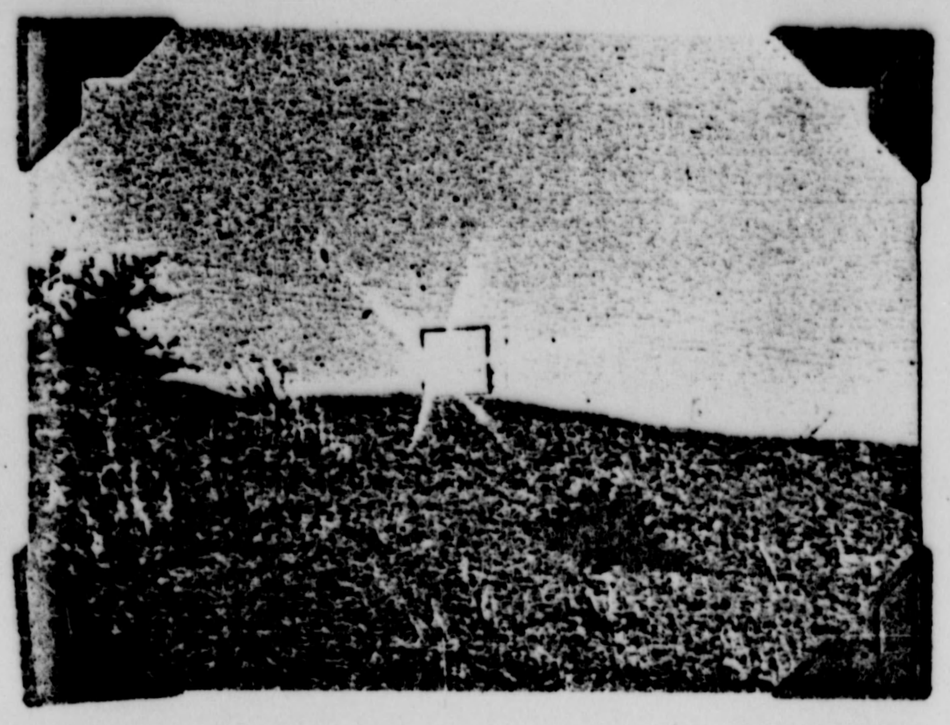

$\beta = \beta_o + \phi$
$V_o T$
UFO PATH
UFO #2
INITIAL OBSERVATION
γ_o
δ_o
β_o
L
UFO #1
δ_o
N
Δ
R
θ
θ_o
R_o
ϕ
OBSERVER
O
α_o
α
N

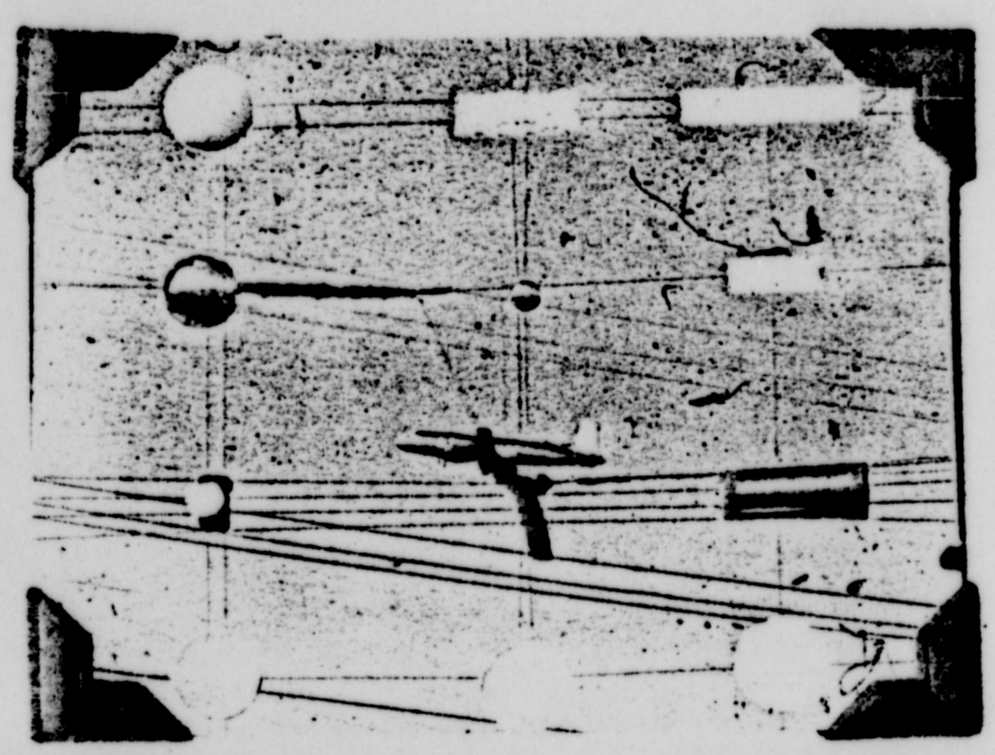
FIGURE 7

Figure 8

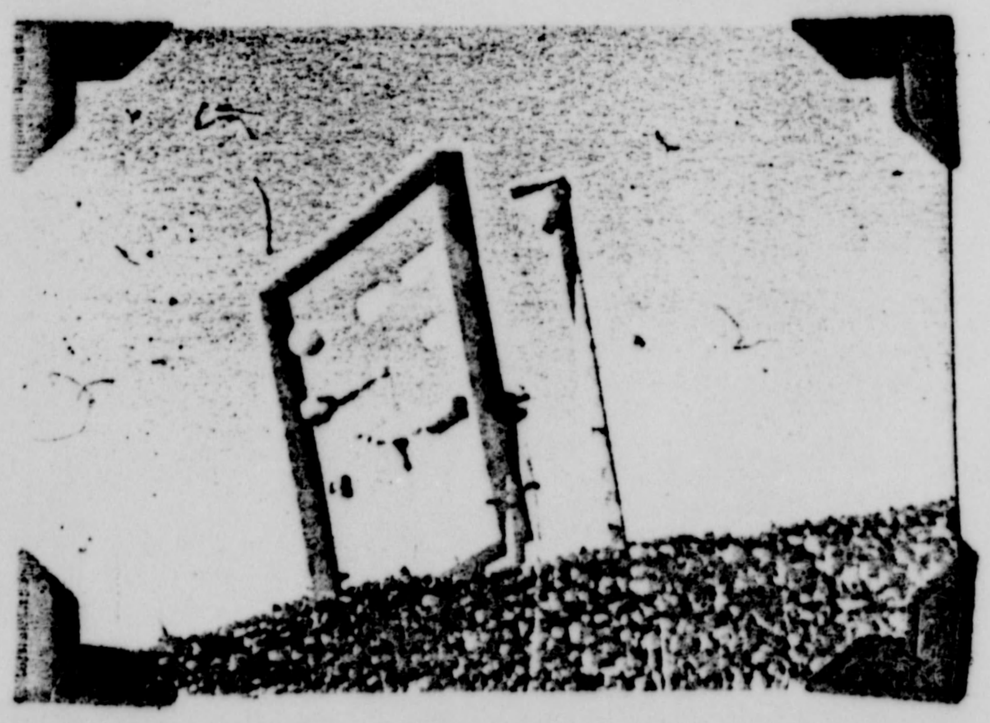
Enlarged frames taken from 16mm Daylight Kodachrome film at f/22 16 fps. *



a) Bright sun reflections from a 1 1/4" diameter plane mirror at 120 ft (1" lens).



b) The array of objects photographed.

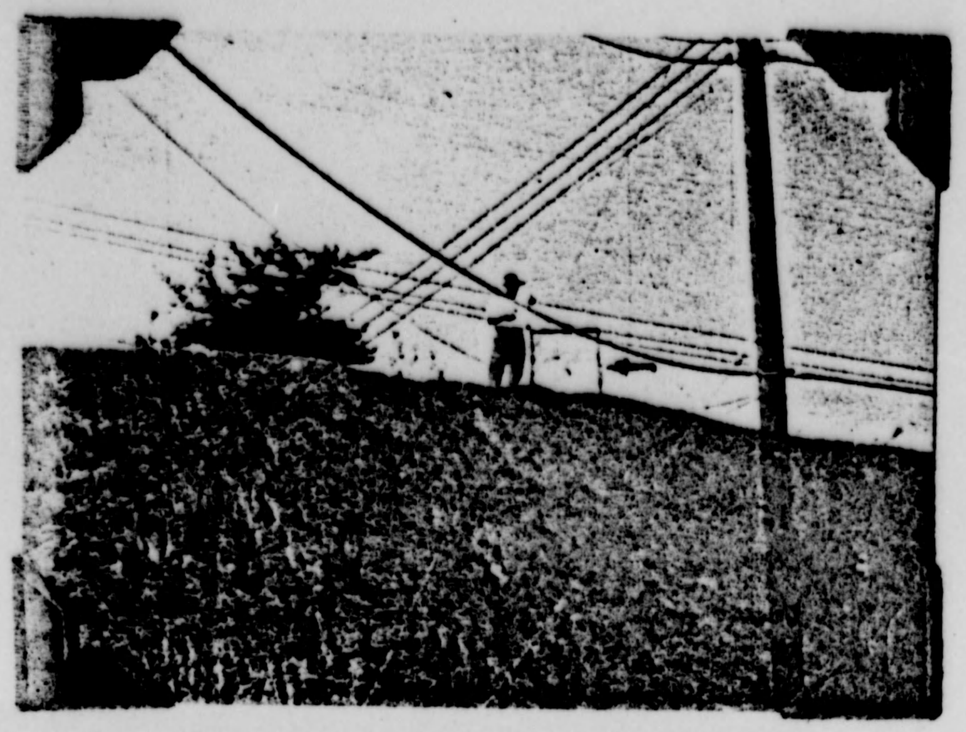


c) Reflection from a DC-6. Scale distances two miles from camera with 3" telephoto lens.

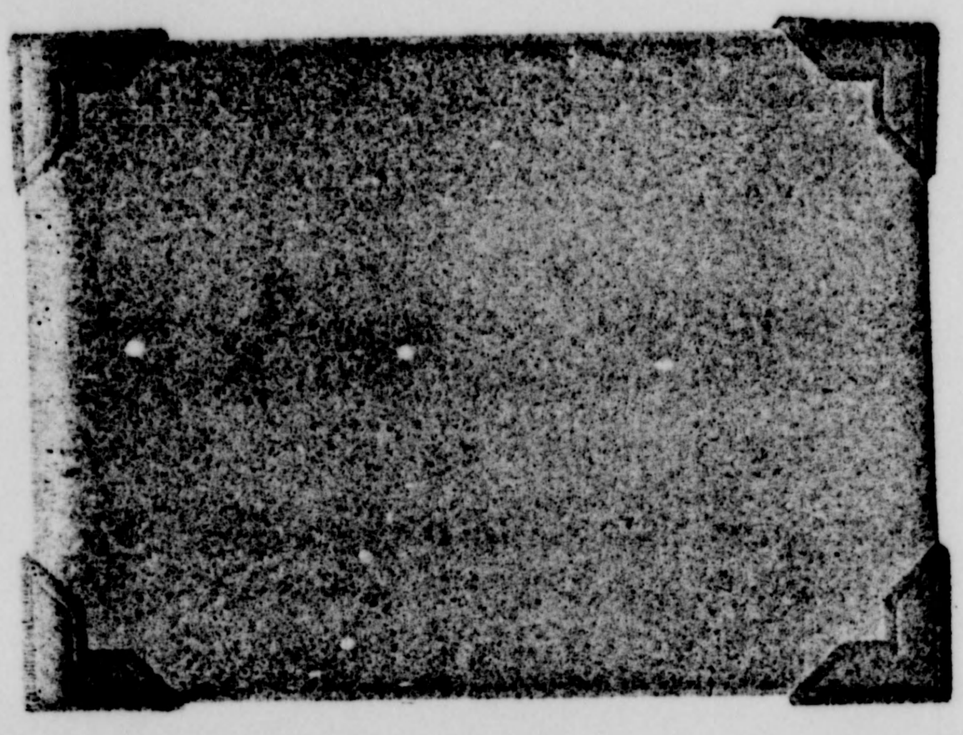
* All frames are of the same magnification.

Figure 9

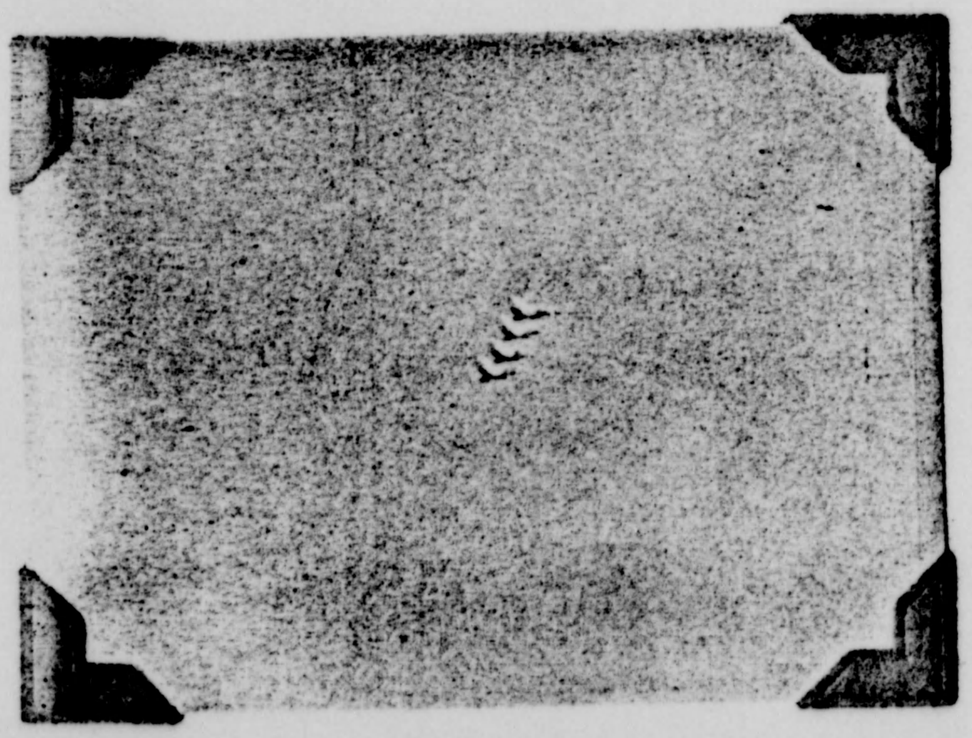
Englarged frames taken from 16mm Daylight Kodachrome film at f/22 16fps. *



a) Reflection from a cylinder corresponding to the reflection from a 50 foot airplane fuselage at scaled distance of two miles using 3" telephoto lens.



b) Actual shot taken from 24th frame of Montana film of the UFO system. Three-inch telephoto lens. (Earlier frames show slightly larger images but did not reproduce as well.)

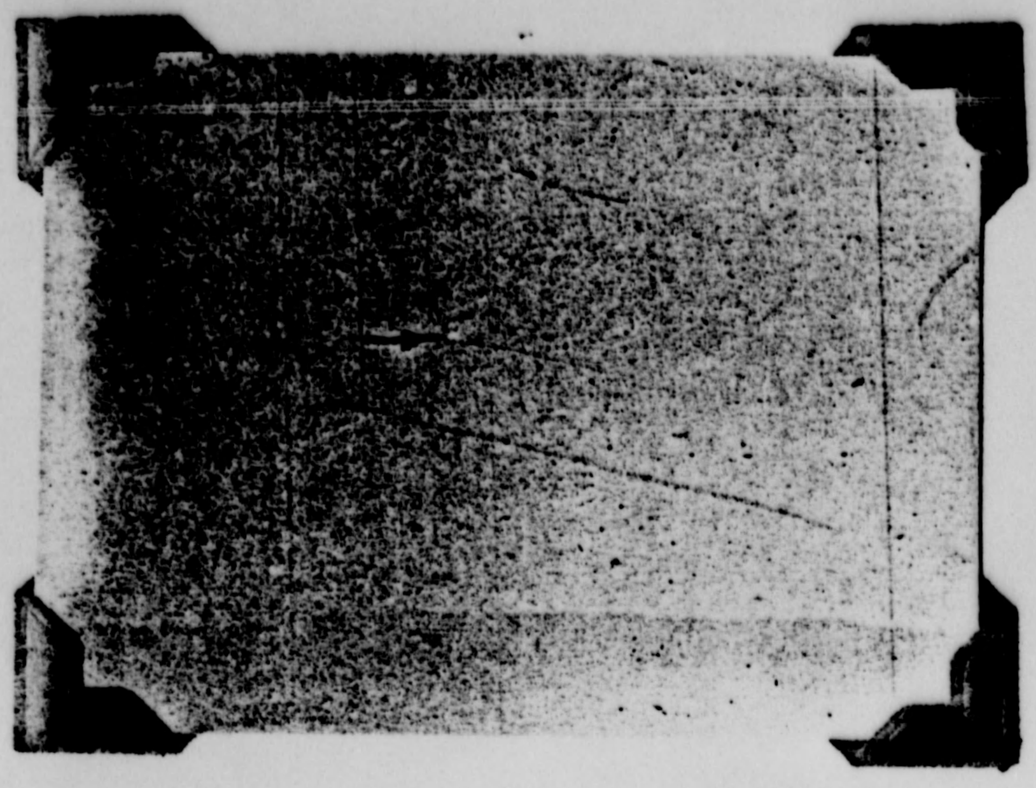


c) Reflection from four jet planes. Estimated distance is 2 1/2 miles. Three-inch telephoto lens. Note the trails behind the jets.

* All frames are of the same magnification.

Figure 10

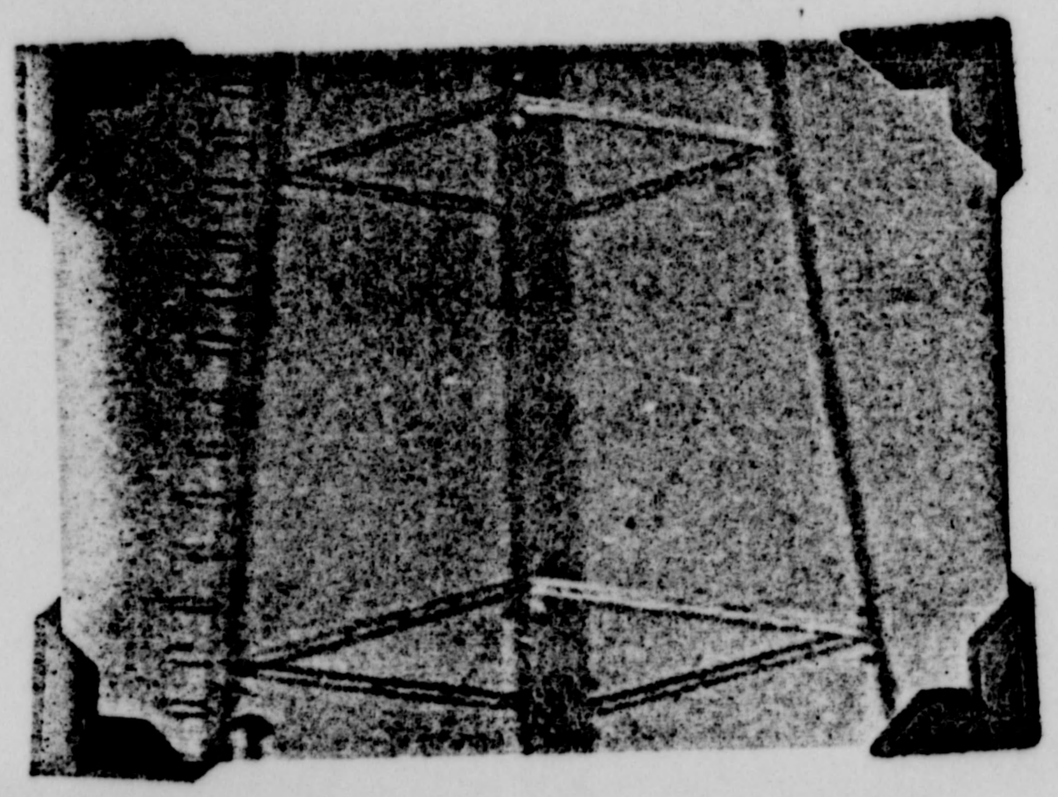
Enlarged frames taken from 16mm Daylight Kodachrome film at f/22 16 fps. *



- Five miles
- Three miles
- One mile

a) Commercial plane (100 foot) over the Los Angeles International Airport. Estimated distance is 12 miles. (3" telephoto lens)

b) Typical fifty foot airplane silhouettes as they would appear on blown up frames (3" telephoto lens).



c) Actual shoot taken from Montana Film of the UFO system just before it fades out.

---

* All frames are of the same magnification.

WITH REGARD TO YOUR COMMENTS ON THE GREAT FALLS INCIDENT, THE MATTER WOULD HAVE BEEN CLARIFIED IF YOUR PERSONNEL HAD THE OPPORTUNITY TO REVIEW THE FOLDER WHICH WAS IN COLONEL WATSONS POSSESSION AT YOUR HEADQUARTERS AT THAT TIME. THIS INCIDENT OCCURRED AT APPROXIMATELY 1130 /MST/ ON 5 AUGUST 1950. CAMERA USED TO TAKE PHOTOGRAPHS WAS A REVERSE 16 MM MAGAZINE LOADING TYPE WITH AN F.I.S. WIDE ANGLE TELEPHOTO LENS. PHOTOGRAPHS WHICH ARE OF POOR QUALITY ARE BEING FORWARDED FOR YOUR REVIEW.

RECORDS AT GREAT FALLS AIR FORCE BASE INDICATES THAT TWO F-94 AIRCRAFT WERE IN THE AREA AT THAT TIME. ALSO, MR. [redacted] REPORTED SEEING TWO JET AIRCRAFT IN FLIGHT IMMEDIATELY AFTER TAKING THE PHOTOGRAPHS. IN FACT THE INFORMANT ADMITTED THAT THE OBJECTS REPORTED AND THE JET AIRCRAFT OBSERVED WERE BOTH TRAVELLING IN THE SAME GENERAL DIRECTION AS VIEWED FROM WHERE HE WAS LOCATED. THE MOST PROBABLE EXPLANATION IS THAT THE WOULD-BE OBJECTS WERE ACTUALLY REFLECTION OF THE SUN ON THE TWO AIRCRAFT IN THE VICINITY. IN FACT SUN REFLECTION FROM AIRCRAFT HAS BEEN ONE OF THE PRIME CAUSES OF UNIDENTIFIED OBJECT REPORTS.

END ITEM 2 AMC [redacted]

UNCLASSIFIED

[redacted]

TT-776-Am

19 DEC 50

MCIAXA-1A

file correctly

DECLASSIFIED AT [illegible] YEARS
DOD DIRECTIVE [illegible]

UNCLASSIFIED 505-134780-5

16 May 1952

[redacted]
Hearst Corporation
Legal Department
959 Eighth Avenue
New York City, New York

Dear Mr. Bowden:

This will reply to your questions concerning the observation of unidentified aerial phenomena by Mr. [redacted], Great Falls, Montana on 15 August 1950. Since I understand from Lt Ruppelt that the file in this case was located and offered to you for examination before you departed, I take it that you will not require any copies of material as suggested.

(1) This case came to the attention of the Air Force by a letter from the Great Falls Leader, Great Falls, Montana dated September 13, 1950, signed by Mr. C. [redacted]. Sullivan.

(2) Mr. [redacted] was interviewed by an officer from a nearby Air Force organization. Information was submitted by Mr. [redacted] voluntarily.

(3) The observer stated the sighting took place between 1125 and 1130 hours, MST, 15 August 1950 and phenomena were in sight for a period of about eight seconds. Mr. [redacted] stated that a time of approximately 20 seconds elapsed between his first sighting of the objects and completion of his photography of them. It should be noted that this last time mentioned was obtained from a narrative report of the investigating officer, and is not a direct quotation of statement by Mr. [redacted]

(4) No reply can be made to your question concerning relative size of objects as they appeared in film compared to film size, since film was returned to Mr. [redacted] and is not available for examination.

(5) Conclusion as to probable cause of sighting in this case is: Unknown

0 3 7 1 3 0

Possible causes considered are: Light reflections on two jet aircraft known to be in area at time of sighting; exhaust of aircraft known to be in area at time of sighting; reflections of sunlight on water tower in vicinity.

Sincerely,

FRANK L. DUNN
Colonel, USAF
Commanding

1 June 1956

MEMORANDUM FOR DIRECTOR OF INTELLIGENCE
Attn: Lt Colonel T. R. Johnson, AFOIN-X

SUBJECT: (Uncld) UFO Movie

1. The following statements concerning two of the UFO sightings described in the recently released movie, are submitted in response to Mr. Monts' request of 29 May 1956.

a. The [redacted] Case - Montana - 1950. The original Air Force conclusion, based on the interrogation of witnesses and the evaluation of the data, was that the UFOs were, in all probability, two Air Force F-94 fighter aircraft known to be in the vicinity at the time.

Simulated photographs of aircraft at various distances, made by an aircraft manufacturing firm in a recent independent and unsolicited analysis of the [redacted] film, show striking similarity to the two white blops in this film.

Based on the degree of credibility accorded this early ATIC evaluation and the strong corroborative evidence supplied by the recent independent analysis, the Air Force has no compelling reason to alter its original conclusion.

b. The [redacted] - Utah - 1952. The original film was analyzed by an Air Force Photo Reconnaissance Laboratory shortly after the sighting. The conclusion reached was that a strong possibility existed that the bright spots of light appearing on the film were caused by seagulls soaring in thermal air currents. The credibility of the conclusion was undoubtedly supported by the presence of identifiable seagulls in some of the frames.

This conclusion was further strengthened by movies of seagulls, taken at various distances, which showed them as bright spots of light similar to those in the [redacted] film.

A recent analysis of the [redacted] film, made by Air Force photo specialists totally unaware of the previous history of this case, yielded the opinion that the bright spots of light on the film were bird reflections in the strong sunlight.

The unanimity of opinion present in all evaluations made in this case leaves little reasonable doubt that the UFOs in the [redacted] film were indeed seagulls.

2. Attached is a copy of this memo to be given to Mr. M. A. Monts in the Air Force Press Room in the Pentagon.

JOHN G. ERIKSEN
Colonel, USAF
Deputy Commander

* * *

SO THERE ARE no flying saucers? Well, I saw them on screen when the Clarence Greene-Russel Rouse film, "Unidentified Flying Objects," was previewed here. The somewhat cagey title, which doesn't specifically identify the objects our air force states were "not balloons, not aircraft, not birds, and not faked," scarcely fulfill the breathles content of the film.

Here on screen, for the first time, is shown terrific color footage of "saucers" in flight—footage which up to this time has been held top secret. Skeptics will think twice before dismissing the saucer as a fantasy, but how Greene and Rouse ever pried loose the official air force footage is a story in itself.

12 February 1959

AFCIN-4E4

MEMORANDUM FOR ASSISTANT DEPUTY, SCIENCE AND COMPONENTS

SUBJECT: UFO Film

1. The film "UFO" referenced in the attached letter was produced by the Green-Rouse Studios and released in 1956. Major Dewey Fournet, Jr., Capt. Edward Ruppelt and Mr. Albert M. Chop all were hired as technical advisers, but none had connection with the Air Force in any official capacity at the time. All of the actors in the picture were professionals and no person connected with any of the cases depicted took part.

2. The film of cases incorporated as a part of this picture was obtained from the original owners, [redacted] (The Tremonton Case) and Mr. [redacted] (The [redacted] Case). The Air Force had no connection with the release of this film.

3. A short summary of the two cases follows:

[redacted] Case

Time - 1130
Date - 15 August 1950
Place - Great Falls, Montana

Mr. [redacted] and his secretary were out to inspect a ball park near Great Falls, Montana when they sighted two objects in the sky which they could not identify. Mr. [redacted] took some film of the objects with his Revere turret type 16MM camera.

The objects in this case were analyzed as two F-94 aircraft which were known to be in the area at the time. Simulated photos of aircraft made by an aircraft research firm in an independent and unsolicited analysis was strikingly similar to the [redacted] film.

[redacted]

Time - 1110
Date - 2 July 1952
Place - Tremonton, Utah

[redacted]nd his wife were driving just outside of Tremonton, Utah when they sighted 10 or 12 objects in the sky which they could not identify. Chi[redacted]took some film of the objects with a Bell and Howell Automaster, with 3" telephoto lens. This film was subsequently analyzed by the Photo Reconnaissance Laboratory of WADC as pictures of soaring seagulls.

1 Incl:
Ltr dtd 5 Feb 59
f[redacted]
w/1 Incl

ROBERT J. FRIEND
Major, USAF
AFCIN-4E4

6. The well-known Montana movies of which there has also been a great deal of controversy.

The Montana movies were probably F-94 Starfighters which were in the area at the time of the sighting. These aircraft are capable of supersonic flight and have reheat or afterburner capability.

Yes, I have seen the films in question. The Montana films were good from the standpoint of having some reference to angular momentum. The Air Force answer after viewing the film and investigating was that the two objects were <u>probably</u> F-94 Starfires which were in that area at the time of the sighting. These aircraft have supersonic capability through reheat or afterburner.

The Montana films depicted probable F-94 Starfire fighter aircraft with afterburners functioning and moving at supersonic speeds. There were F-94's (radar equipped interceptors) in the area at the time of the sighting.

[redacted]

UNCLASSIFIED

MCIAXA

MCIAXA-1a/JJR/sag

DEC 2 8 1950

SUBJECT: Unidentified Flying Objects

TO: Director of Intelligence
Attn: Evaluation Division
Technical Capabilities Branch
Headquarters USAF
Washington 25, D.C.

15 Aug 50
Great Falls, Mont

ATIC 130935
T-53-1028-A

The inclosed photographs are forwarded in accordance with OIH-V/TC telecon, TT-743-AM, CSAF Item 9, dated 21 November 1950, dealing with the unidentified objects reported from Great Falls, Montana.

FOR THE COMMANDING GENERAL:

1 Incl
Outline w/12 Photos

HAROLD E. WATSON
Colonel, USAF
Chief, Intelligence Department

Compare w/ other Movies 7 July 52

7-3712-37

DOWNGRADED AT 3 YEAR INTERVALS;
DECLASSIFIED AFTER 12 YEARS.
DOD DIR 5200.10

UNCLASSIFIED

[redacted]

[redacted]

AFOIN-2A2
Maj Fournet/dbv/71379
Wrtn 24 Nov 52

UNCLASSIFIED

AFOIN-2A2

NOV 24 52

MEMORANDUM FOR: DIRECTOR OF NAVAL INTELLIGENCE

ATTN: Op322Y5

SUBJECT: Interpretation of Movies of Unidentified Flying Objects

1. Further to our Memorandum dated 24 October 52, same subject as above, it is requested that the inclosed roll of 16 mm Kodachrome movie film be analyzed in the same manner as the film previously forwarded. In addition, a comparison with the latter film would be most helpful.

2. Background information pertaining to the inclosed film is contained in Incl 2, the official report on this incident.

3. Your cooperation in satisfying this additional request is earnestly solicited. In addition, notification of preliminary results of both analyses at the earliest opportunity would be appreciated. Such preliminary data may allow us to complete some of the pending action on these films prior to receipt of the final results.

2 Incls
1. 16 mm Kodachrome movie film(original)
2. Cy of official rept of Unconventional Acft sighting

WILLIAM A. ADAMS
Colonel USAF
Chief, Topical Division

AFOIN 2A2 Comeback Copy

DOWNGRADED AT 3 YEAR INTERVALS;
DECLASSIFIED AFTER 12 YEARS.
DOD DIR 5200.10

UNCLASSIFIED

[redacted]

AFOIN-2A2
Maj Fournet/cmb/71379
Wrtn 15 Oct 52

OCT 16 1952

VIA AIR MAIL

Great Falls

Mr. [redacted]
Great Falls, Montana

Dear Mr. [redacted]

You are probably aware of the fact that the Air Force is still continuing the investigation and analysis of "flying saucers". We are presently attempting to make a comparative analysis of recent sightings against those made in previous years. In this connection, the report of a sighting made by you on 15 August 1950 has aroused our interest. Unfortunately, however, our duplicate copy of the movies which you took of these objects has been inadvertently misplaced.

Therefore, we would be most grateful if you would permit us to borrow your original movies for study and duplication. In so doing you would be rendering us a great service.

We will have an officer from Great Falls Air Force Base contact you about 22 October and, should you consider our request favorably, he will obtain the movies and give you a receipt for them. We will then return them as soon as possible thereafter.

Your cooperation and consideration in this matter is earnestly solicited.

Sincerely,

CC: AFIC

WILLIAM A. ADAMS
Colonel, USAF
Chief, Topical Division
Deputy Director for Estimates
Directorate of Intelligence, DCS/O

AFOIN-2A2 Come back cy

[redacted] UNCLASSIFIED

SUBJECT: (Unclassified) Request for Reproduction

TO: AFCIN-1B1 FROM: ATTC DATE: NOV 7 1952 COMMENT NO: 2
ATTN: Capt Stidd (RC 1112h) Miss Shaffer/31g
25279/62830/P2C

1. In compliance with telephone conversation between Major Fournet of AFCIN-2A2 and Captain Ruppelt, one roll of 16 mm color film was retained in this Center. The remainder of the 16 mm prints and negatives are returned as requested.

2. The film referenced in paragraph 3 of comment No. 1 could not be reproduced in color because of the stripped sprocket holes; therefore, the film was reproduced in black and white.

4 Incls
1. Print H-130-5137-B (2 cys)
2. Neg Dup H-130-5137-B (2 cys)
3. Dup H-130-5137-B
4. Color Print H-130-5137-C

WALTER D. HACH, Major, USAF
Chief, Technical Services Division
Air Technical Intelligence Center

DOWNGRADED AT 3 YEAR INTERVALS:
DECLASSIFIED AFTER 12 YEARS.
DOD DIR 5200.10

OK

UNCLASSIFIED

[redacted]

AFOIN-1B1
Capt Stidd/bb/76036
w/24 Oct 52

UNCLASSIFIED

PB/PS 10-52 (Unclassified) Request for Reproduction

Chief, Air Technical Intelligence Center
Wright Patterson AFB
Dayton, Ohio

Dept of the AF
Hq USAF - AFOIN-1B1

Capt Stidd/bb/76036

24 OCT 1952

1. It is requested that the enclosed film be reproduced according to requirements as listed below. It is further requested that this reproduction be accomplished with ten (10) days or as soon thereafter as possible. It is extremely urgent that this reproduction be made available to the Director of Intelligence.

2. It is requested that two (2) color duplicates and one (1) black and white print, exclusive of portion with sound track which is spliced to the end of the film, be reproduced. The loose (unspliced) portion of seventeen (17) frames belongs at the end of the footage having a deep blue background and no sound track. The last frame of this loose portion is immediately adjacent to the splice with the broken frame having the sound track.

3. If at all possible, it is requested that the stripped sprocket holes in the loose portion of the original be repaired to make it possible to run this part along with the remainder of the film without malfunction.

4. Utmost care should be exercised in processing this film to avoid further damage. It is requested that the original be cleaned as carefully as possible prior to duplication.

5. This is the film referred to by Lt. Col. William A. Adams in telephone conversation with ATIC this date.

1 Incl
Roll of Film

/s/ BURTON R. GRINYER
Major, USAF
Chief, Processing Branch
Dissemination Control Division

Reproduction Possible Copy.

DOWNGRADED AT 3 YEAR INTERVALS;
DECLASSIFIED AFTER 12 YEARS.
DOD DIR 5200.10

UNCLASSIFIED

AFOIN-1B1
Capt Stidd
Maj Grinyer

[redacted]

Disseminated: 24 Oct 1450

L/C Adams 10/24/52

Requirements

1. 2 color duplicates and 1 black & white print (exclusive of portion with sound track which is spliced to the end of the film).

2. Request the original be handled with utmost care (it is already in fairly poor condition, and we are very anxious that it suffer no further damage).

3. Request the original be cleaned as carefully as possible prior to duplication.

4. Request utmost effort in controlling duplication to extent that resulting copies will be as identical to original as possible in image and color reproduction.

5. The loose (unspliced) portion of 17 frames belongs at the end of the footage having a deep blue background and no sound track. The last frame of this loose portion is immediately adjacent to the splice with the broken frame having the sound track.

6. Can the stripped sprocket holes in the loose portion of the original (see 5) be repaired in any way - sufficiently to make it possible to run this part along with the remainder of film without malfunction?

AFOIE-2A3

AFOIE-2A3
Fournet/dbv/71379
w/14 Nov 52

14 Nov 52

SUBJECT: Movie Film Belonging to Mr. [redacted]

TO: Commanding Officer
1701st Air Transport Wing
Continental Division, MATS
Great Falls AFB, Montana

ATTN: Wing Intelligence Officer

1. Subject film, obtained by you on loan from Mr. [redacted] and forwarded to this Headquarters on 30 October 1952, is inclosed herewith for return to the owner.

2. A personal letter to Mr. [redacted] expressing the appreciation of this Headquarters is also inclosed. Request delivery to him at the time that the film is returned. A copy is included for your files.

3. Your cooperation in this matter has been most commendable.

FOR THE CHIEF OF STAFF:

2 Incls
1. 16 mm Movie Film
2. Ltr to Mr. Mariano (in dup)

Copy furnished:
[redacted]

WILLIAM A. ADAMS
Colonel, USAF
Chief, Topical Division
Deputy Director for Estimates
Directorate of Intelligence, DCS/O

Doc 6

AFOIN-2A2
Maj Fournet/dbv/71379
w/ 14 Nov 52

NOV 14 1952

Mr. [redacted]
Great Falls, Montana

Dear Mr. [redacted]

We wish to express our sincere appreciation for the assistance which you extended us in connection with your movies. We had duplicate copies made, but these will be used for official purposes only, of course.

Instead of splicing the film at the torn point, as discussed with you previously, it was repaired with cellulose tape. This permitted satisfactory study and duplication without the loss of any frames. However, we recommend against running it in this condition too often, especially at fast projector speeds, since the patch will eventually fray and may result in additional damage. We suggest instead that you make a permanent splice as soon as possible.

The movies constitute a definite contribution to our current analysis. It is impossible for us to add any further comments about them until such time as exhaustive analysis provides us with the basis for some definite conclusion, if any is possible.

Again we tender our sincere thanks for your cooperation and hope that the film's absence has not caused you any hardship.

Sincerely,

WILLIAM A. ADAMS
Colonel, USAF
Chief, Topical Division
Deputy Director for Estimates
Directorate of Intelligence, DC3/O

AFOIN 2A2-Comeback Copy

Incl 2

DOUGLAS

AIRCRAFT COMPANY, Inc.

SANTA MONICA DIVISION
SANTA MONICA, CALIFORNIA

April 16, 1956

Brig. Gen. Harold E. Watson
Commander, ATIC
Wright-Patterson Air Force Base
Ohio

Dear General Watson:

Enclosed is a report of an analysis of the "Montana" film of Unidentified Flying Objects photographed by Nicholas Mariana in August 1950. This report was prepared by the Douglas Aircraft Company's Missiles Engineering Department Research Section, incidental to a study of publications dealing with unconventional propulsion schemes, under the direction of Dr. W. B. Klemperer. It is being submitted for your perusal in case it might be of interest to you in connection with Project Blue Book as a supplement to such information as has already been compiled. The film and necessary information for this analysis were furnished us by the Green-Rouse Studios who will soon release a documentary film on UFO's.

Green-Rouse Studios have requested that copies of the present report be made available to them by April 22, 1956. If your command has no objection to the release of our analysis or sections thereof, we are quite willing, in view of their full cooperation, that they have the desired copies. It would be greatly appreciated if your approval or disapproval of the release of the material to them be sent to us prior to April 22, if necessary by telephone or by teletype.

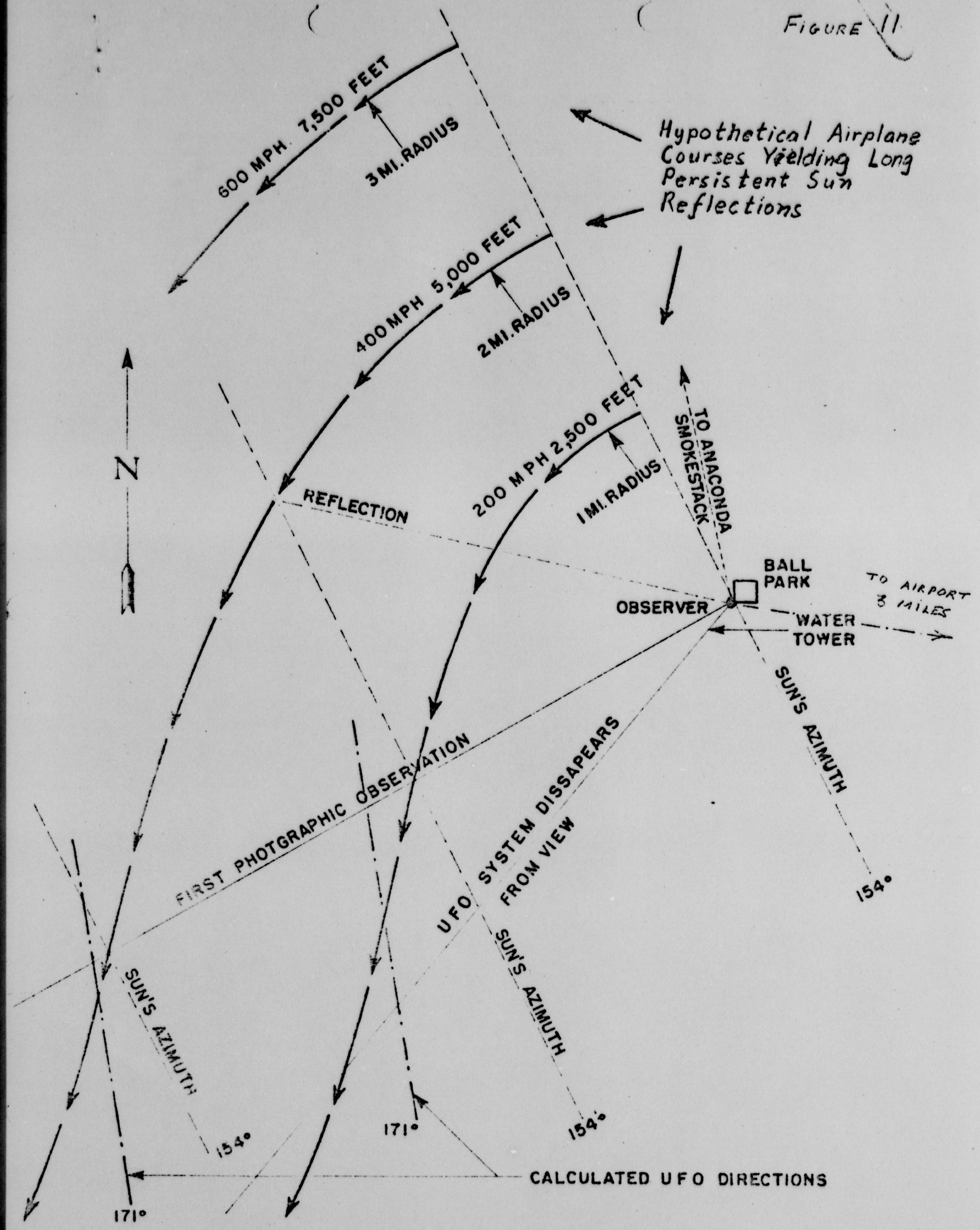
Sincerely,

A. M. Rochlen
Vice President - Public Relations

WBK:gc

Enclosure: Noted

FIGURE 11


600 MPH 7,500 FEET
3 MI. RADIUS
400 MPH 5,000 FEET
2 MI. RADIUS
200 MPH 2,500 FEET
1 MI. RADIUS
Hypothetical Airplane Courses Yielding Long Persistent Sun Reflections
TO ANACONDA SMOKESTACK
N
REFLECTION
BALL PARK
OBSERVER
WATER TOWER
TO AIRPORT 3 MILES
SUN'S AZIMUTH
154°
FIRST PHOTGRAPHIC OBSERVATION
UFO SYSTEM DISSAPEARS FROM VIEW
SUN'S AZIMUTH
154°
171°
SUN'S AZIMUTH
154°
171°
CALCULATED UFO DIRECTIONS

REFERENCES

(1) The "American Nautical Almanac" 1950.

(2) H.O. No. 214, "Tables of Computed Altitude and Azimuth for Latitudes 40° to 49°".

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(4) Kaiser, T. R., "Meteors", Pergamon Press, 1955.

(5) La Paz, L. "Meteoroids, Meteorites, and Hyperbolic Meteor Velocities", Chapt. XIX of the Physics and Medicine of the Upper Atmosphere.

(6) O. C. Farrington. "Meteorites", Chicago, 1915.

(7) "Measurement of Birds", Scientific Publications of the Cleveland Museum of Natural History, Vol. II, 1931.

(8) Kartright, F. H., "The Ducks, Geese and Swans of North America". American Wild Life Institute, 1943.

(9) Headley, F. W. "The Flight of Birds", Witherly and Co. 326 Holborn, London, 1912.

(10) Menzel, D. H., "Flying Saucers", Harvard University Press, 1953.

(11) Mees, C. E. K. "The Theory of the Photographic Process", Revised Edition, MacMillan Co., N.Y., 1954.

(12) Danjon, A., Conder, A. "Lunettes et Telescopes", Paris, 1935.

(13) Kuiper, G. P., "The Atmospheres of the Earth and Planets", University of Chicago Press, 1951.

(14) Ruppelt, E. J., "The Report on Unidentified Flying Objects", Doubleday and Co., 1956.

FILM

15 Aug. 1950

GREAT FALLS, MONTANA

FILE # 1003323

IN Custody of AUDIO - VISUAL ARCHIVES

1975

SEPTEMBER 1950 SIGHTINGS

DATE	LOCATION	OBSERVER	EVALUATION
Sep (Info)	Korea (Lorenzen)	Military Air	
Sep	Guam	[redacted]	Other (Psychological)
12-	Ernest Harmon AFB, Nfndld	Gd (RADAR)	InsufficientData
1	Nunivak Island, Alaska	[redacted]	Astro (Ref of Setting Sun)
3	Spokane, Washington	[redacted]	UNIDENTIFIED
3	Spokane, Washington	[redacted]	Astro (Meteor)
8	Spokane, Washington	[redacted]	Astro (Meteor)
11	Adak, Alaska	[redacted] (PHOTO)	Other (Lens Flare)
13	Effingham, Illinois	[redacted]	A/C
16	Nashville, Tennessee	Multi	Other (Contrails)
17	Tatum, N Mexico	[redacted]	Astro (Ref of Setting Sun)
17	Roswell, N Mexico	[redacted]	A/C
18	Oklahoma City, Oklahoma	[redacted]	Balloon
19	Poplar Bluff, Missouri	Gd & Air Vis (James)	Balloon
20 (Info)	Tenn, Ky (Newsclipping)	Meteorite recovery	
20	Kit Carson, Colorado	"Reliable Observer"	UNIDENTIFIED
20	Denver, Colorado	Military Air	Astro (Meteor)
21	Provincetown, Mass	Ground (RADAR)	UNIDENTIFIED
25	Mt Palomar, Calif	[redacted]	A/C
26	Birmingham, Ala	[redacted]	Astro (Star/Planet)
29	Sandia Base, N Mexico	[redacted]	Astro (Meteor)
30 (Info)	Philadelphia, Pa (Bessor)		

OCTOBER 1950 SIGHTINGS

DATE	LOCATION	OBSERVER	EVALUATION
Oct	Northern Rhodesia	Not Stated	Astro (Meteor)
7	Kauai, T Hawaii	[redacted]	Astro (Meteor)
10	New Orleans, La	[redacted]	Balloon
10	New Orleans, La	[redacted]	Insufficient Data
11	Lark River, Utah	[redacted]	Astro (Meteor)
12-16	Knoxville, Tennessee	(RADAR)	Other (Radar Peculiarities)
15		[redacted]	UNIDENTIFIED
15		[redacted]	Balloon
16		[redacted]	A/C
16		[redacted]	Balloon
13 (Info)	Keating Summit, Pa	[redacted]	
13	March AFB, Calif	[redacted]	Insufficient Data
15	Pope AFB, N Carolina	[redacted]	UNIDENTIFIED
		Gd [redacted]	UNIDENTIFIED
20	New Haven, Conn [REPORT RETURNED TO ORIGINATOR]	[redacted] REPORT RETURNED TO ORG.	A/C
21	Warrenton, N Carolina	[redacted]	Astro (Star/Planet)
23	Bonlee, N Carolina	[redacted]	UNIDENTIFIED
31	Cuba	[redacted]	Astro (meteor) Camera
28	Genessee Mountain, Colorado	[redacted] (PHOTO)	Other: 1) Light Leak in/C 2) Poor Process 3) Foreign Matter Adhering to Negative.

EPT. 1950 OFF THE COAST OF KOREA (LORENZEN P 19) 6 WITNESSES

VERY EARLY IN THE MORNING, THREE FIGHTER-BOMBERS TOOK OFF FROM THE LIGHT-DECK OF A U.S. AIRCRAFT CARRIER. THE SUN HADN-T RISEN AND THERE WAS A ITE IN THE AIR. TWO MEN -- A PILOT AND A RADAR GUNNER -- OCCUPIED EACH OF HREE PLANES ASSIGNED TO A ROUTINE MISSION, BOMBING AND STRAFING A TRUCK ONVOY THAT COMBAT INTELLIGENCE EXPECTED TO BE WINDING ALONG THE FLOOR OF A ALLEY ABOUT A HUNDRED MILES FROM THE YALU RIVER. THE TAKEOFF WAS ROUTINE, AS AS THE FLIGHT TO THE TARGET AREA. AT ABOUT 7 A.M., JUST AS THE SUN WAS REAKING ABOVE THE MOUNTAINS IN THE EAST, THE AIRCRAFT WERE PROCEEDING NORTH, EN THOUSAND FEET ABOVE THE VALLEY FLOOR. RADAR OBSERVERS HAD THEIR EYES EELED FOR THE TARGET.

I WAS WATCHING THE GROUND BELOW FOR THE CONVOY, REPORTED ....., *AND AS STARTLED TO SEE TWO LARGE CIRCULAR SHADOWS COMING ALONG THE GROUND FROM ORTHWEST AT A HIGH RATE OF SPEED. WE WERE FLYING NORTH ABOVE A VALLEY WHICH AS SURROUNDED ON THE EAST AND WEST BY MOUNTAINS, WITH A PASS DIRECTLY AHEAD F US TO THE NORTH. WHEN I SAW THE SHADOWS I LOOKED UP AND SAW THE OBJECTS HICH WERE CAUSING THEM. THEY WERE HUGE. I KNEW THAT AS SOON AS I LOOKED AT Y RADAR SCREEN. THEY WERE ALSO GOING AT A GOOD CLIP -- ABOUT 1000 OR 1200 ILES PER HOUR. MY RADAR DISPLAY INDICATED ONE AND A HALF MILES BETWEEN THE OBJECTS AND OUR PLANES WHEN THE OBJECTS SUDDENLY SEEMED TO HALT, BACK UP AND BEGIN A **JITTERING,** OR **FIBRILLATING MOTION.** MY FIRST REACTION, OF COURSE, WAS TO SHOOT. I READIED MY GUNS, WHICH AUTOMATICALLY READIED THE GUN CAMERAS. WHEN I READIED THE GUNS, HOWEVER, THE RADAR WENT HAYWIRE. THE SCREEN **BLOOMED** AND BECAME VERY BRIGHT. I TRIED TO REDUCE THE BRIGHTNESS BY TURNING DOWN THE SENSITIVITY, BUT THIS HAD NO EFFECT. I REALIZED MY RADAR HAD BEEN JAMMED AND WAS USELESS. I THEN CALLED THE CARRIER, USING THE CODE NAME. I SAID THE CODE NAME TWICE, AND MY RECEIVER WAS OUT -- BLOCKED BY A STRANGE BUZZING NOISE. I TRIED TWO OTHER FREQUENCIES, BUT COULDN-T GET THROUGH. EACH TIME I SWITCHED FREQUENCIES THE BAND WAS CLEAR FOR A MOMENT, THEN THE BUZZING BEGAN.

*WHILE THIS WAS GOING ON THE OBJECTS WERE STILL JITTERING OUT THERE AHEAD OF US, MAINTAINING OUR SPEED. ABOUT THE TIME I GAVE UP TRYING TO RADIO THE CARRIER, THE THINGS BEGAN MANEUVERING AROUND OUR PLANES, CIRCLING ABOVE AND BELOW. I GOT A GOOD LOOK AT THEM. I HAD NEVER SEEN ANYTHING LIKE THEM BEFORE, AND I LEARNED AFTER WE REACHED OUR CARRIER THAT THE OTHER MEN IN THAT FLIGHT HAD THE SAME OPINION. THEY WERE HUGE. BEFORE MY RADAR SET WAS PUT OUT OF COMMISSION, I USED THE INDICATED RANGE PLUS POINTS OF REFERENCE ON THE CANOPY TO DETERMINE THEIR SIZE. THEY WERE AT LEAST 600 OR POSSIBLY 700 FEET IN DIAMETER.

*THE OBJECTS HAD A **SILVERED MIRROR** APPEARANCE, WITH A REDDISH GLOW SURROUNDING THEM. THEY WERE SHAPED SOMEWHAT LIKE A COOLIE-S HAT, WITH OBLONG PORTS FROM WHICH EMANATED A COPPER-GREEN COLORED LIGHT WHICH GRADUALLY SHIFTED TO PALE PASTEL-COLORED LIGHTS AND BACK TO THE COPPER-GREEN AGAIN. ABOVE THE PORTS WAS A SHIMMERING RED RING WHICH ENCIRCLED THE TOP PORTION.

*WHEN THE THINGS MANEUVERED ABOVE US, WE SAW THE BOTTOMS OF THEM. IN THE MIDDLE OF THE UNDERSIDE WAS A CIRCULAR AREA, COAL BLACK AND NON-REFLECTIVE. IT WAS SIMPLY INKY BLACK, AND IT IS IMPORTANT TO NOTE THAT ALTHOUGH THE WHOLE OBJECT **JITTERED** WHILE MANEUVERING, THE BLACK CIRCULAR PORTION ON THE BOTTOM WAS STEADY AND SHOWED NO INDICATION OF MOVEMENT.**

WHEN THE OBJECTS SEEMINGLY FINISHED THEIR INSPECTION OF THE NAVY PLANES, THEY TOOK OFF IN THE SAME DIRECTION FROM WHICH THEY HAD COME, AND DISAPPEARED AT A HIGH RATE OF SPEED.