

PROJECT 10073 RECORD CARD

1. DATE 2 Oct 61		2. LOCATION Salt Lake City, Utah		12. CONCLUSIONS ☐ Was Balloon ☐ Probably Balloon ☐ Possibly Balloon ☐ Was Aircraft ☐ Probably Aircraft ☐ Possibly Aircraft ☐ Was Astronomical ☐ Probably Astronomical ☐ Possibly Astronomical ☒ Other <u>Prob Sun Dog</u> ☐ Insufficient Data for Evaluation ☐ Unknown	
3. DATE-TIME GROUP Local <u>1215</u> GMT <u>021916Z</u>		4. TYPE OF OBSERVATION ☒ Ground-Visual ☐ Ground-Radar ☒ Air-Visual ☐ Air-Intercept Radar			
5. PHOTOS ☐ Yes ☒ No		6. SOURCE Civilian			
7. LENGTH OF OBSERVATION 15 min		8. NUMBER OF OBJECTS one		9. COURSE Varied	
10. BRIEF SUMMARY OF SIGHTING Sun at time and date of direction coincident with that reported for UFO. UFO was reported to be at elevation of aprox 22° above horizon while absolute elev of sun fm Salt Lak area was 46° 59' 42" at time of sighting. This would put objt at aprox 24° below sun. It is noted that weather conditions at time of sighting indicate high cirrus clouds. Cirrus clouds are associated with ice crystals. Sun dogs, which are associated with ice crystals, form at 22 1/2° and times 45° fm sun. All indications in this case are directed toward objt being a sun dog. It is significant that witnesses on ground observed objt to be stationary while airborne witnesses indicate motion--probably his own. There is no available evidence which would indicate that objt of sighting was not a sun dog. See: Tape 7-3745-356 (TAPE IN SPECIMEN FILE)					

INTELLIGENCE REPORT

INTELLIGENCE REPORT

DEPARTMENT OF THE AIR FORCE

WARNING: This material contains information affecting the National Defense of the United States within the meaning of the Espionage Laws.

UNCLASSIFIED

Title 18, USC, Secs 793 and 794, the transmission or revelation of which in any manner to an unauthorized person is prohibited by law.

COUNTRY: United States of America

REPORT NO: IR-1-61

SUBJECT: (U) UFO

DATE OF REPORT: 9 October 1961

DATE OF INFO: 2 Oct 61

REFERENCES: AFR 200-2/Complete

NO OF PAGES: 12

PLACE & DATE ACQ: Utah Central Airport
Salt Lake City, Utah

EVALUATION: B-2

FROM: Sec & Law Enforce Div, Hill AFB

SOURCE: Sources below named

PREPARED BY: Douglas M. Crouch

SUMMARY:

At 1916Z hours on 2 October 1961 a report of a UFO sighting was received from civilian sources at the Utah Valley Airport, Salt Lake City, Utah, via Flight Operations Division, Hill AFB, Utah, and the Salt Lake City Utah Air National Guard Control Tower. Six of the eight persons who reported seeing the object were available and were interviewed at the Central Valley Airport and tape recorded statements obtained. All six of the persons agreed that the object had no similarity to manned aircraft, either in configuration, speed, or maneuverability. The sixth person attempted to make an interception of the object and stated he flew within three to five miles of the object before it rose rapidly, started off in an upward southerly direction, paused and then disappeared to the west at a speed believed in excess of 1,000 miles per hour. Federal Aeronautics and Utah Air National Guard personnel at the Salt Lake Municipal Airport were contacted and reported that no radar contacts had been made with the object. Wind velocities at various altitudes in the area discounted the possibility that the object could have been a weather balloon moved rapidly at times by the wind, and no balloons released during that period locally had assumed such a direction or path. No unusual meteorological or astronomical conditions were present which might account for the sighting. Visibility was 40 miles with ceiling unlimited at the time the civilian pilot of the intercept plane reported he approached within three to five miles of the object and was within 1,000 feet of its altitude. A telephonic report of this sighting was made to the Command Post Duty Officer, Air Force Logistics Command, Wright-Patterson AFB, Ohio, at 2134 hours MST (0434 Zu), who advised that the taped statements of observers and a taped report of investigation be forwarded

DISTRIBUTION BY ORIGINATOR: FTD-E 3 cys,
w/1 Attachment: Tape recording of statements
of observers.

UNCLASSIFIED

DISTRIBUTION BY HQ USAF
CIA

ARMY

NAVY

NSA

INTELLIGENCE REPORT

INTELLIGENCE REPORT

This format is used in lieu of AF Form 112 which is not available.

UNCLASSIFIED

REPORT NO: IR-1-61
PAGE 2 OF 12 PAGES
FROM: Sec & Law Enforcement
Div, Hill AFB, Utah

to FTD-E via Air Mail. As of the date of report it is believed that all logical leads have been exhausted in an effort to identify the object.

1. At 1916Z hours on 2 October 1961 the Flight Operations Division, Hill AFB, relayed a report from the Salt Lake City Utah National Guard Control Tower that approximately eight civilians at the Utah Central Airport (40 38N, 111 58W), 3200 West 21st South, Salt Lake City, Utah, had observed an unidentified object in the sky which reportedly hovered above the Provo, Utah, OMNI (40 15N, 111 55W), located twenty-three miles south of the Utah Central Airport, and that one of the observers had attempted an air intercept of the object and had approached within three to five miles of the object before it moved off and disappeared.

2. At approximately 1910Z the Salt Lake City Air Traffic Control Center rerouted a transient F-100 aircraft to the area of the reported sighting to make a search. At 1940Z the aircraft landed at Hill AFB and reported no contact with the item.

3. At 2200Z on 2 October 1961 Mr [REDACTED], [REDACTED] Utah, Aircraft Attendant at the [REDACTED] was interviewed at that location, with a tape recording being made of the interview. The following information and answers received to questions is prefaced by the paragraph number of items of information requested in paragraph 15, AFR 200-2, dated 14 September 1959.

15a(1) Shape - At distance he observed object he could not determine shape.

15a(2) Size - Couldn't compare size to any known object, but stated it must have been large and couldn't have been an aircraft because you couldn't see an aircraft at approximately eight miles, and this object was at least thirty miles away, approximately over the Provo OMNI.

15a(3) Color - A distinct silver color.

15a(4) Number - One

15a(5) Formation - None

15a(6) Discernible features - None

15a(7) Tail, trail, or exhaust - Could see none. It was suspended there and not even moving.

15a(8) Sound - No sound heard.

15a(9) Pertinent features - None observed.

UNCLASSIFIED

This format is used in lieu of AF Form 112a which is not available.

UNCLASSIFIED

REPORT NO: IR-1-61

PAGE 3 OF 12 PAGES

FROM: Sec & Law Enforcement
Div, Hill AFB, Utah

15b(1) What called attention to object - Report on object over UNICOM from pilot who was attempting to intercept object.

15b(2) Angle, elevation, azimuth - Estimated 2,500 feet above the ground (Altitude at Utah Central Airport is 4240 feet), at an azimuth of 180 degrees.

15b(3) Angle, elevation and azimuth at time of disappearance - Slightly higher than 2,500 feet above the ground at the same azimuth.

15b(4) Flight path and maneuvers - Did not see it move, but would see it in one place then it would disappear and reappear in another place away from where it had first been seen.

15b(5) How did object disappear - Object faded out in the same location.

15b(6) How long object visible - For approximately fifteen minutes.

15c(1) Manner of observation - Naked eye.

15c(2) Optical aids - None.

15c(3) Airborne sighting - N/A

15d(1) Zulu time, date group - 1900Z, 2 October 1961.

15d(2) Light conditions - Daytime

15e Location of observer - Front of office of Utah Central Airport (40 38N, 111 58W), 3200 West 21st South, Salt Lake City, Utah.

15f Information on observer - From observation and interview WOODS appears to be a mature and stable person, and this opinion is shared by his employers. WOODS holds a private pilot license with fifty-five hours flying time. He has worked around aircraft for approximately eight years.

15g(1) Weather and winds - [REDACTED] stated the weather was clear with no cloud cover, and there was very little surface winds.

4. At 2225Z on 2 October 1961 [REDACTED], [REDACTED], [REDACTED], Industrial Banker, was interviewed at the Utah Central Airport, with the interview recorded on tape. The following information and answers to questions was obtained:

15a(1) Shape - Had an oval shape when sun was shining on object. When it disappeared to those watching without binoculars, it looked to him like it was dark and more or less cigar shaped. That the oval shape was like a football.

UNCLASSIFIED

This format is used in lieu of AF Form 112a which is not available.

UNCLASSIFIED

REPORT NO: IR-1-61

PAGE 4 OF 12 PAGES

FROM: Sec & Law Enforcement
Div, Hill AFB, Utah

15a(2) Size - At the distance he compared the object with the size of a baseball (hardball).

15a(3) Color - It was dark, and when the sun was shining on it, it reflected silver or aluminum. It did not have a shimmering effect like it was vibrating, and the edges were clear.

15a(4) Number - One

15a(5) N/A

15a(6) Features or details - No protruding wings or tail section that he could see.

15a(7) Tail, trail, or exhaust - None that he could see.

15a(8) Sound - None

15a(9) Pertinent features - None.

15b(1) What called attention to object - The pilot of the intercept plane reporting the object from the air.

15b(2) Angle, elevation, azimuth - Could not estimate any of those.

15b(3) Angle, elevation, and azimuth at time of disappearance - Was not watching object at the time it disappeared.

15b(4) Flight path and maneuvers - Did not observe any flight path at the time he was watching with binoculars. Object was stationary and appeared to hang suspended all the time.

15b(5) How did object disappear - Was not watching at the time object disappeared.

15b(6) How long object visible - Somewhere between ten and fifteen minutes.

15c(1) Manner of observation - Naked eye and binoculars.

15c(2) Optical aids - Binoculars.

15c(3) Airborne sighting - N/A

15d(1) Zulu time, date group - Time unknown, 2 October 1961.

15d(2) Light conditions - Daytime.

UNCLASSIFIED

This format is used in lieu of AF Form 112a which is not available.

UNCLASSIFIED

REPORT NO: IR-1-61

PAGE 5 OF 12 PAGES

FROM: Sec & Law Enforcement
Div, Hill AFB, Utah

15e Location of observer - Front of office of Utah Central Airport (40 38N, 111 58W), 3200 West 21st South, Salt Lake City, Utah.

15f [REDACTED] appeared to be a mature person in his early fifties and was consistent in his answers with regard to the above questions. Although he has no pilots license or connection with aviation, CARD has considerable flying time as a passenger in private and commercial aircraft.

15g(1) [REDACTED] stated the weather was bright and clear with no clouds, and that there was very little wind.

5. At approximately 2245Z on 2 October 1961 Mr [REDACTED], Aircraft salesman, was interviewed at the Utah Central Airport, with the resulting information recorded on tape. [REDACTED] stated substantially as follows:

15a(1) Shape - Couldn't determine any definite shape when observing the object with the naked eye.

15a(2) Size - Could not estimate size.

15a(3) Color - With the sun shining on it, it looked silver. It looked like a solid color, with no shimmering like it was vibrating.

15a(4) Number - One

15a(5) Formation - N/A

15a(6) Features or details - None from his observation.

15a(7) Tail, trail, or exhaust - None that he observed.

15a(8) Sound - None

15a(9) Pertinent features - None observed

15b(1) What called attention to object - The radio report from the civilian pilot who first sighted the object.

15b(2) Angle, elevation, azimuth - Appear to be between three and five thousand feet elevation when first sighted, and about thirty miles out. Due south of the Utah Central Airport. West of PROVO OMNI.

15b(3) Angle, elevation, and azimuth at time of disappearance - Was talking on the UNICOM and did not watch the object disappear.

UNCLASSIFIED

This format is used in lieu of AF Form 112a which is not available.

UNCLASSIFIED

REPORT NO: IR-1-61

PAGE 6 OF 12 PAGES

FROM: Sec & Law Enforcement
Div, Hill AFB, Utah

15b(4) Flight path and maneuvers - I saw it in one position low on the horizon, and the second time it was to the right and higher, maybe eight to ten thousand feet variation. It was approximately five minutes between the two sightings.

15b(5) How did object disappear - Was not watching at time the object disappeared as he was talking on UNICOM.

15b(6) How long object visible - About five to seven minutes.

15c(1) Naked eye.

15c(2) Optical aids - None.

15c(3) Airborne sighting - N/A

15d(1) Zulu time, date group - Did not note time on 2 October 1961.

15d(2) Light conditions - Daytime.

15e In office of Utah Central Airport (40 38N, 111 58W), 3200 West 21st South, Salt Lake City, Utah.

15f Information on observer - [REDACTED] appeared to be a mature individual in his early forties, and was very consistent in his statements. He holds a private pilot's license, with approximately six hundred hours flying time. He firmly believed that what he saw was a tangible object.

15g(1) Weather and winds - Clear with very little surface wind.

6. At approximately 2325Z hours on 2 October 1961 Mr [REDACTED] Salt Lake City, Utah, [REDACTED] of the [REDACTED], was interviewed at that location, with the interview recorded. [REDACTED] gave the following answers and information:

15a(1) Shape - Could not determine a definite shape.

15a(2) Size - Compared size of object with a basketball at that distance.

15a(3) Color - Without the light shining on it, it appeared to be gray, and the shiny part would be a bright brilliant flame color.

15a(4) Number - One

15a(5) Formation - N/A

UNCLASSIFIED

This format is used in lieu of AF Form 112a which is not available.

UNCLASSIFIED

REPORT NO: IR-1-61

PAGE 7 OF 12 PAGES

FROM: Sec & Law Enforcement
Div, Hill AFB, Utah

15a(6) Features or details - None observed.

15a(7) Tail, trail, or exhaust - None observed.

15a(8) Sound - None heard.

15a(9) Pertinent features - None

15b(1) What called attention to object - Radio report from the civilian pilot first observing object.

15b(2) Angle, elevation, azimuth - Altitude at lower point was about 15,000 feet and it extended on up about 20,000 feet, at different times after it had moved up. The distance away was about fifteen to twenty miles.

15b(3) Angle, elevation, azimuth at time of disappearance - Climbed at an upward angle from approximately 20,000 feet altitude and disappeared to the west.

15b(4) Flight path and maneuvers - It was climbing and changing altitude. It seemed to go to the east for some time and hover in one position, then the last he remembered it was going west, climbing and going west. Some of the maneuvers were at rapid speed, and some were slow. At one time it climbed quite fast, with abrupt changes of direction.

15b(5) How did object disappear - Faded away rapidly to the west.

15b(6) How long object visible - Close to fifteen minutes.

15c(1) Manner of observation - Binoculars and naked eye.

15c(2) Optical aids - Binoculars.

15c(3) Airborne sighting - N/A

15d(1) Zulu time and date group - Right close to 1900Z hours on 2 October 1961.

15d(2) Light conditions - Daytime.

15e Front of office of Utah Central Airport (40 38N, 111 58W), 3200 West 21st South, Salt Lake City, Utah.

15f Information on observer - [REDACTED] appears to be a logical, mature person in his early fifties, and has been a private pilot for approximately twenty years, with approximately 2,000 hours flying time. His report of the sighting was very coherent.

UNCLASSIFIED

This format is used in lieu of AF Form 112a which is not available.

UNCLASSIFIED

REPORT NO: IR-1-61
PAGE 8 OF 12 PAGES
FROM: Sec & Law Enforcement
Div, Hill AFB, Utah

15g(1) Weather and winds - Clear in every quadrant, with little surface wind.

7. At 2355Z on 2 October 1961 Mr. [REDACTED], [REDACTED] Salt Lake City, Utah, [REDACTED] was interviewed at the Utah Central Airport and gave the following information which was recorded on tape:

15a(1) Shape - Appeared to be a metal object, but he could give no description of the shape.

15a(2) Size - Through the binoculars it appeared to be about the size of a dinner plate.

15a(3) Color - Appeared to be silver in color and was flickering to a certain extent, probably due to the reflection of the sun.

15a(4) Number - One

15a(5) Formation - N/A

15a(6) Features or details - Not that he could see.

15a(7) Tail, trail, or exhaust - Could see none.

15a(8) Sound - None

15a(9) Pertinent features - None observed.

15b(1) What called attention to object - Radio report from civilian pilot who first sighted object.

15b(2) Angle, elevation, azimuth - Approximately two to four thousand feet above the ground (plus 4240 elevation at area of sighting). Approximately over the Provo OMNI, 30 miles south of the airport on a 180 degree heading.

15b(3) Angle, elevation, and azimuth at time of disappearance - Raised upward slightly and disappeared.

15b(4) Flight path and maneuvers - Noticed a flight path of straight up and also to the west. Flight upward was at a rapid speed, the flight to the west was fairly slow. No abrupt change in flight.

15b(5) How did object disappear - Just blotted out. Raised altitude, but the last he saw was just a blotting out of the object, to the west.

15b(6) How long object visible - Approximately five minutes.

UNCLASSIFIED

This format is used in lieu of AF Form 112a which is not available.

UNCLASSIFIED

REPORT NO: IR-1-61

PAGE 9 OF 12 PAGES

FROM: Sec & Law Enforcement
Div, Hill AFB, Utah

15c(1) Manner of observation - Binoculars and naked eye.

15c(2) Optical Aids - Binoculars.

15c(3) Airborne sighting - N/A

15d(1) Zulu time and date group - Unknown on 2 October 1961

15d(2) Light conditions - Daytime.

15e Location of Observer - Front of office of Utah Central Airport (40 38N, 111 58W), 3200 West, 21st South, Salt Lake City, Utah.

15f Information on observer - [REDACTED] appears to be a mature, reliable person in his early thirties, and has been working around airports for some time. He has a student pilot's license, with fifty-five flying hours, and appeared very proficient in the identification of conventional type aircraft.

15g(1) Weather and winds - [REDACTED] stated the sky was clear, with very little surface wind.

8. At approximately 0045Z on 3 October 1961 Mr. [REDACTED], Salt Lake City, Utah, Real Estate Broker, was interviewed and gave the following information and answers which were recorded on tape:

15a(1) Shape - Appeared to be circular or elliptical in shape. When it rocked up it appeared to be a perfect circle. Disked shaped rather than full circular like a balloon, like a saucer.

15a(2) Size - Between thirty-five and fifty feet, half again as large as the wing span on the "Mooney" (Mark 20A), and about four feet thick. Maybe a little thicker in the center.

15a(3) Color - Gray (light) when there was no sun reflected on it, and when the sun reflected in it, it was bright like a mirror.

15a(4) Number - One

15a(5) Formation - N/A

15a(6) Features or details - There was no wing surface, tail surface, or any protruding points from the smooth surface. No ports or exhausts, or windows visible.

15a(7) Tail, trail, or exhaust - None, and he reported watching closely for exhaust trails when the object moved off.

UNCLASSIFIED

This format is used in lieu of AF Form 112a which is not available.

UNCLASSIFIED

REPORT NO: IR-1-61
PAGE 10 OF 12 PAGES
FROM: Sec & Law Enforcement
Div, Hill AFB, Utah

15a(8) Sound - None above the noise of his engine.

15a(9) Pertinent features - None observed in addition to 15a(6) above.

15b(1) What called attention to object - First saw it when he was making take-off run at Utah Central Airport.

15b(2) Angle, elevation, azimuth - Object first sighted directly south of Utah Central Airport on a 180 degree heading. At closest point object was due south of him and at approximately a ten degree angle above him when he was within three to five miles of the object. His altitude was 6,000 feet and he estimated the altitude of the object at between 6,500 and 7,000 feet.

15b(3) Angle, elevation and azimuth at time of disappearance - After maneuvering the object climbed to the west on a 245 or 250 degree heading at a twenty degree upward angle and disappeared out of sight in a second or two.

15b(4) Flight path and maneuvers - When he got within three to five miles of the object he observed the object standing still in the sky with a little rocking motion. There would be times it would rock up so the sun would shine on it, then it would rock down flat so that it looked almost straight like a pencil. When it began to move it went straight up like an elevator for a little then moved off toward the south, still climbing at a fairly steep angle, possibly a thirty degree angle, and then stopped again or seemed to stand still, in the neighborhood of the Utah Lake (Provo) OMNI, or almost directly over the OMNI. Stayed in that position for a minute or two and then made a turn toward the west on a 245 or 250 degree heading and still climbing on possibly a twenty degree angle, disappeared out of sight in a second or two.

15b(5) How did object disappear - Climbed toward the west on a 245 or 250 degree heading and climbing on about a twenty degree angle, disappeared out of sight in a second or two. Estimated speed at time of disappearance in the thousands of miles per hour. Acceleration was extremely fast. Faded out of sight.

15b(6) How long object visible - Five to seven minutes.

15c(1) Manner of observation - Naked eye.

15c(2) Optical aids - None.

15c(3) Airborne sighting - Flying a Mooney Mark 20A, Serial Number 8393E, at an altitude of 6,000 feet on a heading of 180 degrees at an indicated air speed of 140 miles per hour. The aircraft is based at Utah Central Airport.

15d(1) Approximately 1900Z, 2 October 1961.

15d(2) Light conditions - Daytime.

15e Location of observer - Flying at 6,000 feet altitude on a 180 degree heading toward the object. Reportedly flying within three to five miles of object

UNCLASSIFIED

This format is used in lieu of AF Form 112a which is not available.

UFO ANALYSIS SHEET

2Location SALT LAKE CITY, UTAHDate (Local) 2 OCT 1961Hour (Local) 1215Hour (Z Time Group) 2 / 1916Satellite: (Det 5 ATIC, Ext 3279) Astronomical Phenomena (Meteor, Comet, Planet, etc) ✓Radar Analysis (AFCIN-4E1) N/ANatural Phenomena (Ball Lightning, etc) ✓ POSSIBLY SUN DOG.Aircraft, Balloons, Airships, etc ✓Other Evaluation of Source Reliability PROB GOOD

Analysis and Conclusions: THE SUN AT THE TIME AND DATE OF THIS SIGHTING WAS IN A DIRECTION COINCIDENT WITH THAT REPORTED FOR THE UFO. THE UFO WAS REPORTED TO BE AT AN ELEVATION OF APPROXIMATELY 22° ABOVE THE HORIZON WHERE THE ABSOLUTE ELEVATION OF THE SUN FROM THE SALT LAKE AREA WAS 46° 39' 42" AT THE TIME OF THE SIGHTING. THIS WOULD PUT THE OBJECT AT APPROXIMATELY 24° BELOW THE SUN. IT IS NOTED THAT THE WEATHER CONDITIONS AT THE TIME

UNCLASSIFIED

REPORT NO: IR-1-61
PAGE 11 OF 12 PAGES
FROM: Sec & Law Enforcement
Div, Hill AFB, Utah

before it moved off. Stated object was almost directly over Provo OMNI (40 15N 111 55W).

15f Information on observer - [REDACTED] appeared to be an emotionally stable person in his late forties, and gave a consistent and coherent account of the sighting. He holds a private pilot's license and has approximately six hundred hours flying time. Fellow pilots at the airport described [REDACTED] as reliable and very truthful.

15g(1) Weather and winds - Stated the weather was clear on all quadrants, with no cloud cover. Could not determine wind conditions while flying.

9. Following is the balance of information forwarded in compliance with AFR 200-2, dated 14 September 1959:

15g(2) Weather and winds - The US Weather Bureau at the Salt Lake City Airport reported conditions at 1900Z as 11 knot surface winds from NW, 5 knot wind at 12 degrees at 6,000 feet, 10 knot winds from 33 degrees at 10,000 feet, 20 knot wind from 360 degrees at 16,000 feet, and 20 knot wind from 350 degrees at 20,000 feet. No information available above 20,000 feet.

15g(3) Ceiling - Weather bureau reported ceiling clear.

15g(4) Visibility - Reported 40 miles.

15g(5) Cloud cover - None.

15g(6) Thunderstorms - None reported by Weather Bureau.

15g(7) Temperature Gradient - 61 degrees F, Dew Point 31 Degrees F.

15h Unusual activity or condition - None.

15i Interception or identification - One of the observers interviewed reported attempting an air intercept and approaching within three to five miles of the object before it rose suddenly, sloped upward to the south, and hovered before disappearing rapidly to the west. Salt Lake Air Traffic Control diverted a transient F-100 fighter type aircraft to the location of the sighting approximately ten minutes after the report of sighting. Air Search was conducted with negative results.

15j Air traffic and balloon releases - Two balloon releases were reported from the Salt Lake Airport at 1700Z with the winds at 2 knots from the SE, and at 2300Z with 5 knot winds from NW. Prevailing winds at release time would not have carried the balloons into the area of the sighting. Salt Lake Air Traffic Control Center reported no air traffic in this area in a direction which would account for the sighting.

UNCLASSIFIED

This format is used in lieu of AF Form 112a which is not available.

23

UNCLASSIFIED

REPORT NO: IR-1-61

PAGE 12 OF 12 PAGES

FROM: Sec & Law Enforcement
Div, Hill AFB, Utah

15k The preparing officer is a Security Specialist, GS-9, Security and Law Enforcement Division, Hill AFB, Utah. Preliminary analysis indicates that each of the six observers interviewed were logical, mature persons, five of whom had some connection with aviation, and that each person was convinced that he had observed some tangible object not identifiable as a balloon or conventional type aircraft. The observer who attempted the interception and reported closing within three to five miles of the object and within one thousand feet of its altitude gave a definite and coherent description of the size and shape of the reported object, and emphatically and consistently described the maneuvers and flight path of the object. No leads or clues were developed which would lead to the identity of the object or explain the sighting. The Hypothesis that the object was a weather balloon launched from some other geographical location was explored and discarded on the basis of the description of size and shape by most of the observers and their account of the upward flight path and reported speed of the object. No winds aloft were present at the time of sighting with sufficient velocity to account for the reported speed, and there was no terrain deemed capable of causing an updraft which would cause a balloon to rise in the manner generally described. The theory that the object was a manned aircraft was abandoned for the same reasons and the reports that the object seemed to hover or hang suspended for considerable periods of time without movement. The complete absence of cloud cover in the area precludes the possibility that the sighting was due to the projection on clouds of an image on the ground. No unusual meteorological or astronomical conditions were present which would furnish an explanation for the sighting, especially since this was a daytime sighting and generally agreed that the object was below 9,000 feet altitude. There are no known manufacturers or operators of experimental type aircraft in this area, and no missile or test firings are conducted in the area other than static tests. With the completion of this initial investigation, it is believed that all local efforts to explain the sighting and identify the object have been exhausted.

Douglas M. Crouch

DOUGLAS M. CROUCH
Security Specialist, GS-9
Internal Security Branch

1 Atch
Tape recording of interviews
of observers

APPROVED:

Charles W. Brion

CHARLES W. BRION
Major, USAF
Chief, Security & Law
Enforcement Division

UNCLASSIFIED

This format is used in lieu of AF Form 112 which is not available.

Now with regard to this investigation on Unidentified Flying Objects; would you give your name please?

[REDACTED]

And what was your address?

[REDACTED]

And your occupation?

I work here at the airport.

Is that a mechanic?

No, just taking care of the aircraft.

Do you have a pilot's license?

Yes, I do.

About how many hours flying time do you have?

About 55.

With regard to this object, about how long did you watch it?

I would say that before it went out of sight, about 15 minutes.

Would you describe the shape?

It was too far away to see the shape. I could see it glisten. It was silver in color. It would go out of sight and then it would come back and the sun would shine on it again and we would see it for 2 or 3 minutes and then it would go out of sight again.

Then you couldn't compare the size to any known object?

No, I couldn't compare the size, but as far away as it looked it must have been awful big because it couldn't have been any large aircraft because you can only see as you know a regular aircraft, a large aircraft, approximately 5 miles. And this was at least 30. I would say that it was approximately over Provo Omni in the mountain range out there.

You say approximately 30 miles?

I would say approximately 30 miles.

And you wouldn't have any idea as to color?

All I could see was that it was silver. I didn't look through the binoculars, but I could see it very distinctly.

And were there any features you get from manned aircraft such as vapor trail or anything?

Nothing whatsoever. It was suspended there. It wasn't even moving.

And you didn't hear any sound during this time?

No sound; the only thing that I actually heard was the pilot talking to us on the Unicom that he had it in sight and he was trying to follow it trying to get close to it.

Could you estimate the angle or elevation? Altitude?

At that distance I would estimate, just guessing, I would say 2500 ft above the ground, just guessing, that is quite a distance.

2500 ft altitude?

Yes, above the ground.

Is that 2500 or 25,000?

2500. And at times it was lower than that and at times it was a little bit higher than that. It didn't stay in the same place. It seemed to go out of sight and then it would come back and it would be in a different place all together.

What direction would that be from the office here?

Due South.

With regard to flight path, did you see it move at any time?

I did not see it move. If it would have been moving, it would have been moving away from us. But like I say, we would see it in one place and then it seemed like it would go out of sight and then the sun would hit it and we could see it for 2 or 3 minutes and it would be in an all together different place. It would be away from where it had been in the first place.

But at the time you were viewing it you couldn't determine any direction of travel?

No, not unless it was going away from us.

How long did you watch this?

About 15 minutes.

15 minutes. Did you watch it until it disappeared?

Yes, I did.

Did it travel at that time or did it just fade out?

It just faded out.

At this time you weren't using binoculars?

No, I did not use binoculars. I didn't look through them at all. I was just using the naked eye.

OK sir, I think that will be all.

Would you give me your name and address, Sir?

My name is [REDACTED]

May we have your address in [REDACTED]
[REDACTED]

And what is your occupation, Sir?

I'm an industrial banker.

And do you have a private license?

No, I do not have a license.

You don't have any flying time?

I have no flying time but I fly a good deal in private planes with rentals and sometimes hire a pilot such as this trip I'm on now. I do have a lot of time in the air as a passenger.

When you observed the object was that from the office here?

Yes.

And could you describe the shape?

Well, it's a little hard to describe. I did watch it for a few minutes through binoculars. And it appeared that at times the sun would shine on it and at that time it had an oval shape and then it would--I watched it first without binoculars and I could see it--as I say it looked like the sun was reflecting on it and it was hard to determine any shape at all without the binoculars but when I watched it with binoculars it seemed to have an oval shape when the sun was shining and then as it disappeared to those people who were watching without binoculars it looked to me like a dark and more or less cigar shaped.

At the time when it looked like an oval would that have been a full oval or a disc shape?

That would be what I would call an oval like a football.

Can you compare this with any known object? Such as a football or something like that?

It was shaped like a football when the sun shone on it and I saw it one time when

the sun was not shining on it and it looked dark and it was cigar shaped.

With regard to the size of the object what would you compare that to at that distance?

I'd have no--oh, you mean at that distance? I see what you mean. Oh, I would say, oh what would I compare it with? The size of a baseball.

And with regard to color, you said when the sun was out it was rather dark.

It was just dark, yes. And when the sun was shining on it, it looked like it reflected silver or aluminum.

When the sun was on it, did it have a shimmering effect like it was vibrating?

No, it didn't, it was--edges were clear.

It was a steady color then?

Yes.

Did you notice any distinguishing features like you see on manned aircraft with an exhaust or vapor trail?

No. None.

Did it have any protruding points like a tail section or wing?

Not that I could see.

At that time there was no sound?

No sound.

What would you estimate the distance as?

I'd have no idea. I'm not familiar with the country. I did hear the pilot that was in the plane talking and he said it was approximately over the Provo Omni and I didn't have any idea where the Provo Omni is and I'd have no estimate as to distance.

Could you estimate the altitude or the angle from the ground?

No, I couldn't.

During the time that you watched it, was there any specific flight pattern? Does it move in any direction?

While I was watching it through the binoculars it was just suspended in the air. There was no movement up, down, or sideways. It seemed to remain stationary.

You think at this time the disc was rotating?

I couldn't say.

But it was stationary?

It was stationary.

Were you watching it at the time when it disappeared?

No, I wasn't. I had a little business with a gentleman here and I left before it disappeared. The others were still out watching it when I came back to the office.

About how long did you watch it?

I would estimate somewhere between 10 and 15 minutes.

You have any idea what time that was?

No, I don't.

OK sir, and thanks very much.

Would you state your name and address?

[REDACTED], Nebraska.

What is your occupation?

I worked for [REDACTED] (?) up until a week ago and now I'm selling aircraft and insurance.

What type of license do you have as a pilot?

Private Pilot's license.

And about how many hours flying time?

600 hours.

With regard to this flying object report, would you describe the shape of this object as you saw it?

Well, actually the shape to me--I got the description from a guy in a Moony Mark 20. He said it was pencil shaped and to me it seemed like it - I never did view it through binoculars. I viewed it with the naked eye and with the sun shining on it I couldn't tell its shape really.

Then all the time you were watching it you were--

I was on the phone--I called the Air National Guard and got ahold of a Mr. Jones I believe and then I was talking on the Unicom to the pilot of this Moony Mark 20 that we flew in here 2 days ago.

Then as far as the actual observation, you couldn't determine a distinct shape?

Not myself. Now I took the shape from what the pilot was talking to me about over the Unicom.

From your own observation, could you determine any color?

Well, with the sun shining on it, it looked silver. The pilot described it from the air as being very reflective and having a dull gray color. And accelerating rapidly to the right after he pulled up to within 3-5 miles of it.

From your own observation, this silver color--Was it shimmering as if it were going back and forth, or was it solid silver?

It looked solid to me. He said it seemed to tilt. And I think maybe the sun shining on it, if it was very high reflective, it would--it looked solid color to me. It didn't seem to be shimmering any.

From your observation, was there any features such as you would find on manned aircraft such as a vapor trail?

No, from my observation there wasn't and from what he said there was no exhaust. There was no tail section; there was no wing. It was pencil shaped, according to his--

What would you say the angle or altitude would be?

Well, I would say that it was--the first time we sighted it, I would say that it was right at between 3 and 5,000--I mean it would be hard to say at that distance because it seemed to be about 30 miles out over this--west of this--Omni down here--what is it--Provo Omni. It was west of that. Now when he pulled up to within 3-5 miles of it he was at 6000 I believe--I mean he'll verify that when he--

And you say it appeared to be about 30 miles away?

Right.

Which direction would that be?

South. I was looking out the window when I saw it, talking on the phone, and at the same time trying to talk on the Unicom to him.

And it would be due South of the Central Aviation?

Right.

With regard to the flight path of the object--did you see it move at any time?

I saw it in this one position; the first time it was low on the horizon and the second time it was to the right and higher. I'd say maybe 8-10,000 ft variation. I mean it's hard to say at that distance.

How much time would there have been between the two sightings?

That's hard to say too. It shouldn't have been over 5 minutes though.

What would have been the total time that you observed this on the two occasions?

The total of the time--Well actually these other people had it spotted with binoculars and I probably only saw it the first time for a minute or two and the second time for a minute or maybe more than that.

Were you watching it when it disappeared?

No, I wasn't. I was talking on the Unicom I believe.

About what time was this? Do you recall?

I don't know the time. I should know; I should have looked at my watch--but I didn't. You should be able to get it from one of these other--

With regard to weather, was there any cloud cover?

No, it was clear but it was slightly hazy. The mountains were in the haze but this was, in my estimation, a very tangible object. I mean, I don't believe it was a weather balloon.

OK, I think that will do it. And thanks very much.

Would you give your name and address, sir?

My name is [REDACTED] Salt Lake City, Utah.

What is your occupation?

I'm an operator of [REDACTED]

And how long have you been in this business?

I've been in this business a couple of years at this location.

How long have you been a pilot?

Twenty years.

About how much flying time do you have?

Probably close to 2000 hours.

Did you notice any definite shape to this object?

No, I wasn't able to see a definite shape.

What did it appear to you like?

I could see the object with my naked eye--the glow of it and through the binoculars I could see that it was just a bright shiny object.

Could you compare it in size to any known object? A baseball or a pea or anything?

Oh, I would say that it was much bigger than that. I would say it was up in 25ft in diameter or something like that.

I mean at the distance, what would you compare the size with?

Oh, a basketball, probably.

Could you determine any color?

The color without the light shining on it would appear to be gray. The shiny part would be a flame color--a bright brilliant flame color.

Was there anything that you would associate with a manned aircraft such as a vapor trail, or an exhaust or a tail section or a wing section?

No, nothing that way.

Was there any sound at this time?

No.

What would you estimate the altitude and the distance to be?

I would estimate the altitude at the lower part of it to be around 15,000 ft and it extended on up to maybe 20,000.

That was a different time when it moved up?

Yes.

And could you estimate the distance?

My estimation of the distance from here would be 15-20 miles.

Could you describe the flight path or maneuvers?

During my observation it would be climbing, changing altitude, it seemed to go to the east for some time and hover in one position then the last I remember it was going west--climbing and going west.

Would these maneuvers be at a rapid speed?

Some of them. Some of them would be slow. I recall one time that it climbed quite fast.

And there would be abrupt changes of direction?

Yes.

And about how long did you observe this?

OF THE SIGHTING INDICATED HIGH
CIRUS CLOUDS. CIRUS CLOUDS ARE
ASSOCIATED WITH ~~ICE~~ ICE CRYSTALS.
SUN DOGS, WHICH ARE ASSOCIATED
WITH ICE CRYSTALS FORM AT
 $22\frac{1}{2}^{\circ}$ AND SOMETIMES 45° FROM
THE SUN. ALL INDICATIONS IN
THIS CASE ARE DIRECTED TOWARD
THE OBJECT BEING A SUN DOG.
IT IS SIGNIFICANT THAT THE WITNESSES
ON THE GROUND OBSERVED THE
OBJECT TO BE STATIONARY WHILE
~~THE~~ THE AIRBORNE WITNESSES
INDICATES MOTION - PROBABLY HIS
OWN.

THERE IS NO AVAILABLE EVIDENCE
WHICH WOULD INDICATE THAT THE
OBJECT OF THIS SIGHTING WAS
NOT A SUN DOG -

Freund.

I would say we were watching this for close to 15 minutes.

Do you know what time this was?

This would be between--right close to 12:00.

And in regard to the weather, was there any cloud cover?

Perfectly clear--not a cloud in the sky.

OK sir I think that's very good.

Would you give me your name and address please?

[REDACTED] and I live at [REDACTED] Salt Lake City, Utah.

And what is your occupation?

[REDACTED]
How long have you been in this business?

I have been employed [REDACTED] at [REDACTED] for almost 2 years.

Do you have a pilot's license?

I have a student pilot's license.

And how much flying time do you have?

Approximately 50 hours.

In regard to this unidentified object, do you have any shape--Could you give any description of the shape of the object?

I can't give you any description or shape of the object other than the sun was reflecting off the object. It appeared to be a metal object. But I cannot--it was at such a distance that I cannot give you any description of shape.

How would you compare the size to any known object, for instance a pea or a baseball?

It was about the size of a dinner plate from where I was looking through the glasses.

Could you determine the color?

The only color I could determine was silver.

Was this a solid silver color or did it appear to be vibrating or flashing?

It appeared to be flickering to a certain extent. I guess it was due to the sun--the reflection off the sun.

Did it have any features comparable to a manned aircraft such as exhaust or vapor trail or any wing or tail surface?

Not to my knowledge. Not that I could see. It did not.

Was there any sound at this time?

I could hear no sound.

Could you give me an idea of the altitude or the angle from the ground?

It looked like from where we saw it--it looked to me like it was approximately 2-4000 ft above the ground, the surface at Provo. The location that was given to us was approximately over Provo Omni and from this distance it looked approximately 4000 ft.

What is the--do you know what the elevation is here?

At this airport? The elevation at this airport is 4240 ft.

Then this would be around 8000 ft?

Approximately 8000 at sea level.

And what would you estimate the distance from here?

The distance from here was approximately 30 miles.

And what direction would that be from the office here?

It would be directly south.

Due south?

Due south.

As you watched this, was there any flight path from east to west, up or down?

I noticed a flight path. I was watching it for approximately 5 minutes through the glasses and I noticed a flight path of straight up. And also to the west.

Was this flight at a rapid speed?

The flight upward was at a rapid speed. The flight to the west was fairly slow.

Were they rapid changes in direction?

The flight up was very rapid; the change to the west was not too rapid.

It wasn't an abrupt change?

No.

Did you watch this until it disappeared?

I watched it through the glasses for approximately 5 minutes and then went back to the hangar to work and watched it for another approximately 5 minutes until it disappeared. Yes.

How did it disappear? Did it appear to move off or was it just blotted out?

Well, more or less blotted out. It raised a slight amount from the time we started watching it out in the hangar--the altitude--it raised altitude. But the actual--the last part that I seen--it was just more or less a blotting out.

At the time of the sighting, was there any cloud cover?

No cloud cover whatsoever.

It was clear?

It was clear.

I think that will about do it.

Would you give me your name and address?

My name is [REDACTED] I live at [REDACTED] Salt Lake City, Utah.

What is your occupation?

Real Estate broker.

What type of pilot's license do you have?

Single engine land.

And about how many hours do you have?

Approximately 600.

In regard to this unidentified object, when did you first sight it?

Just as I was making my takeoff run on Utah Central Airport.

From the best observation you had, could you describe the shape of this object?

Well, it appeared to be circular or elliptical in shape, and it seemed to rock up to one side, it looked to be a perfect circle. It was still about 3-5 miles away from me at the closest point, so I couldn't swear it was circular, but at least it was in that shape.

Would this be called circular or would it be a disc shape?

Well, it was disc shaped, it wasn't like a balloon. It was more like a saucer. Thicker in the center and thinner toward the edges.

What would you estimate the size to be?

Well, I would say somewhere between 35 and 50 ft. I would say it was about half again as wide as the wing span on the Moony.

What is the wing span on the Moony?

35 ft. It would be a good 50 ft across.

And how thick?

Well, I would guess about 4 ft. Maybe a little thicker than that in the center, but not much more than that.

In regard to the color, how would you describe that?

A gray, of course now I was looking toward the right part of the sky in the south and it was a light gray when there was no sun reflected on it, and when the sun reflected, it was bright like a mirror.

Were there any, as compared to a manned aircraft, vapor trail, exhaust, etc?

Nothing that I could observe and I was looking closely for that because when it began to move I was wondering if there wouldn't be some kind of exhaust, fume, trail or something, but there seemed to be none that I could see.

Did this have any of the characteristics of a manned aircraft such as wing section or tail section?

No wing section or tail section or any protruding surface out of this smooth circular disc-shaped surface.

Were there any ports such as exhaust pipes?

Couldn't see any portholes of any kind, no windows, nothing, but again I was looking toward the light part of the sky and it's possible that there were some that weren't visible.

Did you hear any sound at this time?

No, I was in the airplane and of course my own engine was making enough noise that I wouldn't have heard anything outside--not unless it was considerably louder than my own.

At the closest point, at what angle was the object from you?

I would say about a 10° above my level and straight ahead, 0° relative bearing.

You were flying south at the time?

I was flying on a 180° heading.

And that would be directly south?

Right.

Do you recall what your altitude was at this time?

6000.

And what was the altitude of the object?

Between 6500 and 7000.

And at this time how close do you estimate you were?

I would guess between 3 and 5 miles.

During the complete observation, in regard to the flight path,--was it--did it travel from one side to the other--up or down?

Well, it was standing practically still in the sky. It seemed to be in a little rocking motion. There would be times when it would rock up so that the sun would reflect on it and there were other times when it would rock down flat to where it looked almost straight like a pencil. So I was looking at the side view of it. It seemed to be a little wobbling motion while it was standing almost still. When it began to move, it went straight up like an elevator for a little and then moved off toward the south, still climbing at a fairly steep angle, possibly a 30° angle, going up and then stopped again, or seemed to stand still, in the neighborhood of the Utah Lake Omni, almost directly over the position of the Utah Lake Omni as near as I could tell from where I was. It stayed in that position for possibly a minute or two, maybe a little longer than that, and then made a turn toward the west on a heading I would imagine about 245 or 250° heading and still climbing on an angle a little less sharp--possibly a 20° angle and disappeared out of sight in just a few seconds--a second or two.

At this time could you get an estimate of the speed, or was it too fast?

Way too fast. When it did decide to go, it really went; and it was clearly visible and disappeared going away from me in a period of a second or two at the very outside.

In relation to the speed of manned aircraft, say possibly 300 mph, would it be faster than that?

Oh, much faster. I would say probably up in the thousands. The acceleration was extremely fast. Almost like it was being fired by a rocket or something, except that there was no trail, no vapor, nothing visible in the way of our planes.

Was that the case both when it moved straight upward and then when it moved out of sight?

When it moved straight up it went much more slowly, and it seemed to move at a steady rate. It didn't seem to be accelerating greatly as it was moving straight up but as it began to move off on an angle it was moving quite rapidly. In fact I would say that it covered the area from the inside the point of the valley to

over the Utah Lake Omni in a matter of one or two seconds. It was moving rapidly and seemed to come to a stop quite suddenly and yet there didn't seem to be any jerkiness to it at all. It was a very smooth controlled maneuver. I would say it was controlled by something or some one -- I don't know.

When this object disappeared, which direction would that be?

It was going toward the west. I would say at about a 245 or 250 heading.

And did it disappear suddenly or just fade out of sight?

Just faded out. It didn't disappear suddenly. It just faded out. I kept my eye glued right on it, because it was--I mean I could see it was moving away at a great speed and I wanted to see just how long it would take and it was just a second or two until it had faded completely. And it was getting smaller all the time, you could see it was moving away.

It was climbing all the time?

Yes, it was climbing. At a less sharp angle than it went at first. It was probably no more than a 20° angle and maybe even less than that.

What do you estimate the length of time it was under observation?

5-7 minutes.

Was that from the time you first sighted it or when you saw it within 5 miles?

Well, that was from the time I first sighted it. My eyes were on it practically all that time except for just a brief moment or two right after takeoff when I was raising the gear and checking the instruments inside the ship. When I first sighted it, I didn't think it was anything more than an airplane crossing. I saw the sun reflecting on something up there and I made my takeoff run and when I got up to where I started to make my crosswind leg?? I was planning on just coming around one time in the pattern. I wasn't planning on flying out of the pattern at all. But when I started to make my turn I noticed it was in the same position and I thought this was a little odd for an airplane--it should have moved on. When I took another look at it, I realized it had no tail, no wing, or anything else and I was close enough by then that I should have been able to identify an aircraft. I mean even to the make and model. So, I turned out of the pattern then and headed down south and I didn't call in until I got close enough to be sure that it wasn't an airplane and then I got on Unicom and called Utah Central and also raised Provo Unicom and conversed with both of these groups on it. But Provo said that they couldn't see it from the ground but the Utah Central group could see it all right.

And as far as you know no one in Provo saw it?

They reported that they couldn't see it. They said they had the field glasses and were looking exactly where I told them it was but couldn't see anything. I don't know if the light was bad for them at that angle or what the score was, I don't know.

With regard to your own aircraft, what type is it?

Moony Mark 20A.

And do you recall the number?

8393 Echo.

You said before your altitude was--

6000.

Your heading was 180°?

Right.

Your air speed at the time?

140 indicated. Out about 160 or something like that.

And the aircraft's base was Utah Central?

Right.

Do you have any idea as to the time?

It was right close to noon. Your Salt Lake radio could give you the time I am sure if they monitor these things because I phoned on the radio--Salt Lake radio--and made the report to them, immediately after the first sighting. I talked to Provo and they suggested I call Salt Lake Radio; I was talking to Utah Central and Provo all at the same time and Provo said that I should give the report to Salt Lake radio so I switched over to Salt Lake frequency and made my report and then came back on Unicom frequency and headed back toward the field. So they would have a report on the time exactly.

At the time was there any cloud ceiling?

No cloud cover of any kind. The sky was completely blue.

This concludes the taped interviews of six observers of a reported unidentified flying object at the Utah Central Airport at Salt Lake City, Utah, on 2 Oct 61. The interviews were conducted by Security Specialist Douglas M. Krodge(?), Security and Law Enforcement Division, Hill AFB, Utah. This tape will be forwarded to FTD-E, Wright-Patterson AFB along with AF Form 112 covering the sighting.

42

FINAL GALLEY PROOF

Galley 92—THE WORLD OF FLYING SAUCERS

and the sun had the same bearing from the pursuing plane as in the Salt Lake City incident. With the information now available there can be little doubt that [REDACTED] was actually chasing a Skyhook balloon. But in 1948 when so many of the relevant facts were not known, the sundog theory was a reasonable solution and may still be the correct one.

One of the most recent sightings of this type occurred on October 2, 1961, a few minutes after noon [1]. A civilian pilot who was just taking off from the Utah Central Airport at Salt Lake City noticed a bright silvery disk in the air ahead of his plane. He supposed it to be another aircraft crossing his course. When he was air-borne, he was surprised to find that the object, now an elongated pencil shape, still appeared in the same position where he had first seen it and hence could not be a plane. Puzzled, he radioed the control tower and reported the UFO. Looking south as directed by the pilot, the tower operator easily found the object, a bright spot in the sky about 23 degrees directly below the sun and apparently hovering over the town of Provo, forty miles to the south.

Deciding to investigate, the pilot left the traffic pattern and started directly south after the UFO. It seemed to be standing practically still in the sky, with a little rocking motion, at an altitude of 6500 to 7000 feet. He seemed to have approached within three to five miles when the UFO suddenly shot up "like an elevator" and retreated rapidly south, as though taking evasive action. The acceleration was tremendous, almost as though the UFO had been fired from a rocket, but there was no vapor trail and no sound. It then disappeared, gradually. "It just faded out. I kept my eyes glued right on it because I could see it was moving away at a great speed. I wanted to see how long it would take and it was just a second or two until it had faded completely. And it was getting smaller all the time, you could see it was moving away." The speed of departure, the pilot estimated, must have been thousands of miles an hour.

Alerted by the pilot's message to the control tower, several persons on the ground at the Salt Lake City airport, most of them with experience as pilots, had also been watching the UFO. Ground observers at the Provo airport, also alerted, were not able to locate the unknown, even though they had been told it was almost directly overhead.

Investigators from a nearby Air Force Base interviewed the witnesses, who were obviously competent and reliable. All agreed that the unknown had been a bright, silvery, metallic-looking object that seemed to glisten or flicker in the sun; that it was roughly oval or indeterminate in shape; that it was solid and tangible, but not a conventional aircraft or balloon; that it made no sound, showed no

exhaust or vapor trail; that it was in view roughly fifteen minutes, and disappeared gradually by "blotting out" or fading. All but one of the witnesses agreed that the skies had been absolutely clear and cloudless; one stated that, although the day was clear, a very slight haze existed over the mountainous region where the UFO appeared.

In spite of this general agreement, certain significant discrepancies became evident. The pursuing pilot stated that the object had moved up and away from him at incredible speed, as though it were controlled. The ground observers, however, did not see any movement by the UFO. Most of them reported that it remained stationary as though it were suspended in the air; a few said that it vanished at intervals, only to reappear a few seconds later in another place. Most of the time, they agreed, it just hung in the sky until it faded from view.

By analysis of these clues, ATIC was able to solve the mystery. According to the local weather bureau, the sky had been clear with visibility unlimited, but there had been very thin cirrus clouds, a layer of minute ice crystals suitable for producing a mock sun. A sundog would also account for the contradictory statements about the UFO's motion. Since the ground observers remained in one place, their position relative to the sundog did not change and it seemed to remain stationary. The pilot, however, was in a moving plane and changing his position relative to the UFO; hence it seemed to move rapidly away from him. In the same way a rainbow seems stationary to a person who merely stands and watches it. But if he begins to chase it, hoping to catch up and perhaps find the legendary pot of gold, the rainbow seems to move away and elude its pursuer. The pilot's belief that the UFO had exhibited fantastic speed was, according to his own statement, an inference based on the fact that the UFO quickly dwindled, became very small, and vanished. It disappeared, however, not because it was speeding away at thousands of miles an hour, but because of a change in the relative positions of sun and ice clouds that produced the sundog in the first place. One final point nailed down this explanation. The UFO had been 23 degrees from the sun—the distance at which mock suns appear.

The details of this sighting obviously show a striking resemblance to some of those in the Mantell case (p. 000), in which the UFO

SALT LAKE CITY, UTAH - 2 Oct 61: About 1:00 P.M., [REDACTED] a private pilot, spotted a gray, apparently metallic, disc-shaped object as he was taking off from the Utah Central Airport. He first thought it was an airplane but when he got airborne, he saw that it was in the same position and had no wings or tail, so began watching it closely.

[REDACTED] further described the object as being at least fifty feet across and four feet thick, with no visible openings, trails, or exhaust. He flew toward the object, only to have it move upward "like an elevator", then to the south at high speed.

[REDACTED] temporarily lost sight of the object, picking it up again as it hovered almost directly over the Utah Lake Omni Radio Station (a radio-directional station for aviation). After hovering a short while, the disc moved straight up again, then disappeared to the west.

Two Utah Air National Guard jets were scrambled in an intercept attempt that failed.

The object was also seen from the ground by airport officials and other observers. One, a mechanic, watched it through binoculars and said it was like dull aluminum in appearance except when it turned toward the sun. Then the disc shone bril-

34

Audio-Tape

Oct. 2, 1961

SALT LAKE City, UTAH

OBSERVER: Multiple

FILE # 1003595

IN CUSTODY OF AUDIO-VISUAL DIVISION

1975

'Saucer' Soars in

8 Spot 'Saucer'

Disc Leaves S.L. Pilot After Chase

By Darlene Galbraith
Tribune Correspondent

What began as a routine flight Monday noon for a Salt Lake City pilot turned into an exciting chase and launched an investigation by Air Force officials into a report of a "flying saucer."

PILOT WALDO J. Harris, 631 Garfield Ave. (1831 S. State), was the first to sight an "unidentified object" while he was preparing for takeoff on a flight from Utah Central Airport, 3200 W. 2100 South. At least seven other witnesses sighted the same object from the ground.

Mr. Harris, a Salt Lake real estate and insurance salesman, and veteran pilot, told Hill Air Force Base security officials that he first sighted what he thought was another airplane when he turned onto the airport runway ready to begin his flight.

"AT FIRST I thought it was another plane south of the field," Mr. Harris said, "but when I was airborne I was surprised to find the object was still in the same position as when I had first sighted it."

IT WAS THEN, Mr. Harris reported, that he decided to investigate.

"I changed my heading," Mr. Harris continued, "and flew toward what appeared to be a large disc, hovering with a rocking motion at an altitude of between 6,500 and 7,000 feet."

THE PILOT radioed back to Utah Central Airport that he had sighted what he thought to be a "flying saucer" and was going to attempt to get a closer view.

Mr. Harris told officials that he estimated the distance between his plane and the object at about five miles at the time of the sighting.

HE HAD REACHED a point about three miles from it when "it suddenly moved upward like an elevator and began to move south."

His observations of the object, he reported, showed it to be a light gray disc which he estimated to measure at least 50 feet across and about four feet thick at the widest point.

"THERE WERE no openings visible, no vapor trail or exhaust smoke, yet I am sure it was a controlled craft from the performance during my observation," Mr. Harris continued.

The pilot followed the "saucer" when it began its flight and then was able to observe it again when it suddenly halted and began hovering at a point almost directly over the Utah Lake Omni station.

"AFTER HOVERING there," Mr. Harris said, "it moved straight up, then began to move west at an extremely accelerated rate of speed and disappeared within a few seconds."

During his entire flight, Mr. Harris maintained radio communication with both the Utah Central Airport and the Provo Airport.

In addition, he relayed the information to the FAA communications tower at the Salt Lake Municipal Airport.

Salt Lake City, had just landed and reported:

"It wasn't there when I came in."

OTHER WITNESSES, some of whom used binoculars to watch the object, were Mr. and Mrs. Jay Galbraith, 1564-600 East, owners and operators of the airport; Clyde Card and Duane Sinclair, both of Lincoln, Neb., who were preparing for a flight; Robert Butler, 1274 E. 6600 South, an employee of Ute Aeromotive, based at the field, and Russ Woods, 291 E. 700 North, Provo, an airport employee.

ALL OF THE witnesses reported watching the object for "more than 15 minutes."

Mr. Redmond reported that "whatever it was seemed to be rocking while hovering almost stationary just south of the field. At times, as it turned, it almost looked like a zeppelin."

"WE PASSED the field glasses around," Mr. Redmond continued, "and all of us had a good view."

All the witnesses agreed that when the object moved, it was at a terrific rate of speed.

(THE U.S. Weather Bureau said that the prevailing winds measured by a weather balloon at 10 a.m. shortly before the object was sighted, were clocked at two miles an hour and were from a southeasterly direction.)

The next weather balloon was sent aloft at 4 p.m. when the winds at the 7,000 level were registered as being from the northwest and about five miles an hour.)

Seven witnesses at Utah Central Airport reported sighting the object from the ground.

ONE OF THEM, Virgil S. Redmond, 6266 S. 2005 West,

THE AIR FORCE said late Monday an investigator from Hill Air Force Base security division had conducted a routine investigation of the reported sightings of an unidentified flying object Monday noon.

The findings will now be forwarded to Air Force headquarters in Washington, D.C., for evaluation.

A base spokesman said the long range search radar at the base had not reported anything unusual during the day, although the range of surveillance radar does not usually extend into the south Salt Lake City area.



Waldo J. Harris sketches the unidentified object he sighted and chased while flying.

Lake Tribune

h — Tuesday Morning — October 3, 1961

Clearly Pleasant
Salt Lake City and Utah—
Fair with little change in
temperature but warmer in
east portion. Map, Page 6.

Price Ten Cents

rs in S.L. Sky

THE AIR FORCE said late Monday an investigator from Hill Air Force Base security division had conducted a routine investigation of the reported sightings of an unidentified flying object Monday noon.

The findings will now be forwarded to Air Force headquarters in Washington, D.C., for evaluation.

A base spokesman said the long range search radar at the base had not reported anything unusual during the day, although the range of surveillance radar does not usually extend into the south Salt Lake City area.

Unidentified Flying Objects Research Committee®

DEDICATED TO PUBLIC EDUCATION
A NON-PROFIT ORGANIZATION

P. O. Box 5242

AKRON 13, OHIO

The Committee welcomes all past and future sightings of UFO's.



Waldo J. Harris sketches the unidentified object he sighted and chased while flying

Monday to Mrs. Jay Galbraith and Virgil S. Redmond. The pair saw object from ground.

*Was this an
inflated sack
with salt water?*

Oct. 10, 1961

ZCZCSQL752ZCQYB995

PR RJEDSQ

DE RJWZNL 3

ZNR

P 022240Z

1961 OCT 3 03 37

FM COMDR 3635TH FLYTNGWG STEAD AFB

TO RJWFAL/ADC ENT AFB

RJWZSB/28TH AIR DIV HAMILTON AFB

RJEDSQ/ATIC WPAFB

RJEZHQ/HQ USAF WASH DC

RJEZHQ/USAF WASH DC

BT

UNCLAS 15 K

FOR USAF AFCIN, USAF SAFIS, UFO: A. DESCRIPTION OF THE OBJECT:

1. THE SHAPE CIRCULAR, NO TAIL SURFACE, 25 FT DIAMETER AND OBLONG.
2. A WING SPAN OF 30 FT. ONE HALF AS LONG AS MOONY-MARK 20A.

3. THE COLOR IS LIGHT GRAY. 4. ONE. 5. ONE. 6. THICKER IN THE MIDDLE, TWO SAUCERS UPSIDE--DOWN ON EACH OTHER. 7. NONE.

8. NONE. 9. NONE. B. DESCRIPTION OF COURSE OF OBJECT: 1. LIGHT SPOT IN THE SKY STANDING DEAD STILL. 2. 22 DEGREES ABOVE HORIZON. AIRCRAFT SPOTTED AT 600 FEET ABOVE SURFACE. 3. ANGULAR 250 DEGREE HEADING 4. WENT STRAIGHT UP, TURNED SOUTH AND WENT WEST. 5. FADED

1 7E (ufo)
2
3
4 - x20
5

PAGE TWO RJWZNL 3

OUT GOING SOUTHWEST 6. FIRST TIME IS FR TWO MINUTES-SECOND TIME TWO MINUTES. AIRCRAFT WITHIN 3 TO 5 MILES OF OBJECT.

C. MANNER OF OBSERVATION: 1 FLYING PERSONNEL AND GROUND OBSERVERS.

2. BINOCULARS USED BY THE GROUND OBSERVERS. THERE WERE EIGHT GROUND OBSERVERS. 3. MOONY-MARK 20A, NR 8393E, ALTITUDE FROM RUNWAY UP TO 6,000 FT, HEADING 180 DEGREES, SPEED 140 KNOT, HOME STATION UTAH CENTRAL AIRPORT, PROVOST, UTAH.

D. TIME AND DATE OF SIGHTING: 1905 ZULU, 2 OCT 61 E. UTAH CENTRAL

AIRPORT F. IDENTIFYING INFORMATION ON OBSERVERS: 1. [REDACTED] AGE 44, [REDACTED], SALT LAKE CITY, UTAH: JOB REALESTATE, FIRST CLASS SPECIALIST MACHINIST, [REDACTED] SCHOOL. 2. [REDACTED], [REDACTED]

[REDACTED] BOTH OBSERVERS ARE FAMILIAR WITH ALL TYPES AIRCRAFT. G. CLEAR, BRIGHT. WIND FROM NORTH 20-30 KNOT.

H. NEGATIVE. I. NEGATIVE. J. BALLOON RELEASED TWO HOURS PREVIOUS FROM SALT LAKE CITY, UTAH, WITH 10-FOOT DIAMETER . K. THE OBSERVER CLAIM APPEARANCE OF POSITIVE CONTROL PLUS RAPID

ACCELERATION AND CLIME. OBSERVERS FAMILIAR WITH ALL TYPES AIRCRAFT.

BT

030100Z OCT RJWZNL

45
10

OCT. 2, 1961 UTAH CENTRAL AIRPORT

(LORENZEN P 251)

8 WITNESSES00

AT NOON, [REDACTED] A PILOT OF SALT LAKE CITY, WAS PREPARING FOR 01
TAKE-OFF WHEN HE SIGHTED A LARGE, GRAY-COLORED, DISC-SHAPED OBJECT HOVERING 02

SOUTH OF THE AIRPORT. AT FIRST HE THOUGHT IT WAS ANOTHER PLANE, AND HE WAS 03
SURPRISED TO FIND THE OBJECT STILL IN THE SAME POSITION WHEN HE BECAME 04
AIRBORNE. CURIOUS, HE CHANGED HIS HEADING AND FLEW TOWARD WHAT APPEARED TO BE 05
A LARGE DISC HOVERING WITH A ROCKING MOTION AT AN ALTITUDE OF BETWEEN 6500 AND 06
7000 FEET. [REDACTED] RADIOED THE AIRPORT THAT HE HAD SIGHTED WHAT HE THOUGHT TO 07
BE A *FLYING SAUCER* AND WAS GOING TO GET A BETTER VIEW. HE ESTIMATED THE 08
DISTANCE BETWEEN HIMSELF AND THE OBJECT AT ABOUT FIVE MILES. SEVEN OTHER 09
INDIVIDUALS ON THE GROUND ALSO SAW THE OBJECT. ONE, [REDACTED] HAD 10
JUST LANDED HIS PLANE AND REPORTED THAT THE OBJECT WAS NOT THERE WHEN HE CAME 11
IN FOR HIS LANDING. THE OTHER SIX OBSERVERS WERE MR. AND MRS. [REDACTED] 12
[REDACTED] AND [REDACTED] WHO WERE PREPARING FOR 13
A FLIGHT, [REDACTED] AN EMPLOYEE OF UTE AEROMOTIVE BASED AT THE FIELD, AND 14
[REDACTED] AN AIRPORT EMPLOYEE. 15

THEY ALL MADE USE OF A PAIR OF BINOCULARS AND AGREED THAT THE OBJECT 16
HOVERED WITH A ROCKING MOTION AND RESEMBLED A ZEPPLIN AT TIMES. WHEN IT MOVED 17
IT ACHIEVED FANTASTIC SPEED. [REDACTED] MEANWHILE, ATTEMPTED TO CLOSE IN. AS HE 18
APPROACHED HE REALIZED HE HAD MISJUDGED THE OBJECT-S ALTITUDE, FOR IT WAS AT 19
EYE-LEVEL AT SIX THOUSAND FEET. HE HEADED TOWARD IT AND GOT A GOOD VIEW OF 20
THE OBJECT-S TOP PORTION AS IT TIPPED TOWARD HIM, CLEARLY SILHOUETTED AGAINST 21
THE MOUNTAINS TO THE SOUTH. 22

THE OBJECT HAD THE APPEARANCE OF *SAND-BLASTED* ALUMINUM. THERE WERE NO 23
CLOUDS OR GROUND HAZE, AND VISIBILITY WAS EXCELLENT. JUDGING FROM THE ACTUAL 24
DISTANCE OF THE HILLS TO THE SOUTH, [REDACTED] ESTIMATED THAT THE OBJECT WAS ABOUT 25
FIVE MILES SOUTH OF THE FIELD WHEN SPOTTED AND THAT HE GOT WITHIN THREE MILES 26
OF IT BEFORE IT MOVED AWAY. THE DEPARTURE WAS STRANGE. IT BEGAN A VERTICAL 27
CLIMB AND THEN HEADED SOUTH. IT APPEARED TO BE ABOUT FIFTY FEET, IN DIAMETER 28
AND FIVE TO TEN FEET THICK AT THE CENTER. THERE WERE NO PROTRUSIONS, 29
PORTHOLES, WINGS, ETC., AND IT HAD THE APPEARANCE OF TWO SHALLOW DISHES JOINED 30
TOGETHER AT THE RIM. [REDACTED] FOLLOWED THE OBJECT WHEN IT BEGAN ITS FLIGHT AND 31
OBSERVED IT AS IT SUDDENLY HALTED AND HOVERED AT A POINT ALMOST DIRECTLY ABOVE 32
THE LAKE OMNI STATION. THEN IT MOVED STRAIGHT UP AND BEGAN TO MOVE WEST AT AN 33
EXTREMELY ACCELERATED RATE OF SPEED AND DISAPPEARED IN A FEW SECONDS. DURING 34
THE CHASE [REDACTED] MAINTAINED COMMUNICATION WITH BOTH UTAH CENTRAL AIRPORT AND 35
THE PROVO AIRPORT. IN ADDITION, HE RELAYED INFORMATION TO THE FEDERAL 36
AVIATION ASSOCIATION COMMUNICATIONS TOWER AT SALT LAKE MUNICIPAL AIRPORT. 37

OBJECT
SALT LAKE CITY (AP)—A CIVILIAN PILOT REPORTED AN UNIDENTIFIED FLYING
OBJECT SOUTH OF HERE YESTERDAY AND SEVEN PERSONS ON THE GROUND SAID THEY
ALSO SAW IT.

~~SAID HE SPOTTED~~
~~THE DISC-SHAPED OBJECT AS HE WAS TAKING OFF FROM THE~~

A SALT LAKE CITY INSURANCE MAN, SAID HE SPOTTED
THE DISC-SHAPED OBJECT AS HE WAS TAKING OFF FROM THE UTAH CENTRAL
AIRPORT.

"I FIRST THOUGHT IT WAS AN AIRPLANE," HE SAID, "BUT WHEN I GOT
AIRBORNE, I NOTICED THAT IT WAS STILL IN THE SAME SPOT AND HAD NO
WINGS OR TAIL."

SAID IT WAS GRAY, LIKE DULL ALUMINUM. "BUT WHEN I TURNED
TOWARD THE SUN, IT SHONE BRILLIANTLY WITH GOOD REFLECTIVE QUALITY."

A SECURITY OFFICER FROM HILL AIR FORCE BASE TOOK STATEMENTS FROM
AND THE SEVEN OTHER WITNESSES, ALL OF WHOM WATCHED THE OBJECT
FROM THE AIRPORT.

~~THE F-4 SAID ITS RADAR SCOPES DIDN'T PICK UP ANYTHING THAT COULD~~
~~HAVE BEEN THE OBJECT.~~

~~IN WASHINGTON, THE AIR FORCE COMMAND POST SAID IT HAD NOT HEARD~~
~~OF ANY SIGHTINGS OF D~~

THE F-4-A SAID ITS RADAR SCOPES DIDN'T PICK UP ANYTHING THAT COULD
HAVE BEEN THE OBJECT.

IN WASHINGTON, THE AIR FORCE COMMAND POST SAID IT HAD NOT HEARD
OF ANY SIGHTINGS OF UNIDENTIFIED FLYING OBJECTS.

WE1009AED 10/3

46

ZCZCSQL752ZCQYB995

PP RJEDSQ

DE RJWZNL 3

ZNR

P 022240Z

1001 OCT 5 03 37

FM COMDR 3635TH FLYINGWG STEAD AFB

TO RJWFAL/ADC ENT AFB

RJWZSB/28TH AIR DIV HAMILTON AFB

RJEDSQ/ATIC WPAFB

RJEZHQ/HQ USAF WASH DC

RJEZHQ/USAF WASH DC

BT

UNCLAS 16 K

FOR USAF AFCIN, USAF SAFIS, UFO: A. DESCRIPTION OF THE OBJECT:

1. THE SHAPE CIRCULAR, NO TAIL SURFACE, 25 FT DIAMETER AND OBLONG.
2. A WING SPAN OF 30 FT. ONE HALF AS LONG AS MOONY-MARK 20A.

3. THE COLOR IS LIGHT GRAY. 4. ONE. 5. ONE. 6. THICKER IN THE MIDDLE, TWO SAUCERS UPSIDE--DOWN ON EACH OTHER. 7. NONE.

8. NONE. 9. NONE. B. DESCRIPTION OF COURSE OF OBJECT: 1. LIGHT SPOT IN THE SKY STANDING DEAD STILL. 2. 22 DEGREES ABOVE HORIZON.

AIRCRAFT SPOTTED AT 600 FEET ABOVE SURFACE. 3. ANGULAR 250 DEGREE HEADING 4. WENT STRAIGHT UP, TURNED SOUTH AND WENT WEST. 5. FADED

1-7E (ufo)
3
4 - x20
5

PAGE TWO RJWZNL 3

OUT GOING SOUTHWEST 6. FIRST TIME IS FR TWO MINUTES-SECOND TIME TWO MINUTES. AIRCRAFT WITHIN 3 TO 5 MILES OF OBJECT.

C. MANNER OF OBSERVATION: 1 FLYING PERSONNEL AND GROUND OBSERVERS.

2. BINOCULARS USED BY THE GROUND OBSERVERS. THERE WERE EIGHT GROUND OBSERVERS. 3. MOONY-MARK 20A, NR 8393E, ALTITUDE FROM RUNWAY UP TO 6,000 FT, HEADING 180 DEGREES, SPEED 140 KNOT, HOME STATION UTAH CENTRAL AIRPORT, PROVOST, UTAH.

D. TIME AND DATE OF SIGHTING: 1905 ZULU, 2 OCT 61 E. UTAH CENTRAL

AIRPORT F. IDENTIFYING INFORMATION ON OBSERVERS: 1. [REDACTED]

AGE 44, [REDACTED] SALT LAKE CITY, UTAH: JOB REALESTATE, FIRST CLASS SPECIALIST MACHINIST, [REDACTED] SCHOOL. 2. [REDACTED]

[REDACTED], BOTH OBSERVERS ARE FAMILIAR WITH ALL TYPES AIRCRAFT. G. CLEAR, BRIGHT. WIND FROM NORTH 20-30 KNOT.

H. NEGATIVE. I. NEGATIVE. J. BALLOON RELEASED TWO HOURS PREVIOUS FROM SALT LAKE CITY, UTAH, WITH 10-FOOT DIAMETER . K. THE OBSERVER CLAIM APPEARANCE OF POSITIVE CONTROL PLUS RAPID

ACCELERATION AND CLIMB. OBSERVERS FAMILIAR WITH ALL TYPES AIRCRAFT.

BT

030100Z OCT RJWZNL

47

NEWS BRIEFS: A saucer sighting by eight observers, including a veteran pilot, received wide publicity last October 4th. The hovering object was seen by pilot Waldo J. Harris of Salt Lake City, Utah, while he was taking off on a routine flight from the Utah Central Airport. Air Force investigators insisted that the UFO was either a balloon or the planet Venus.

Pilot Chases 50-Foot "Saucer" 61

The recent pursuit of a "flying saucer" by a Utah pilot, fully confirmed by other pilots and airport personnel, is being investigated by AF Intelligence. The chase occurred about noon, Oct. 2, near Utah Central Airport, Salt Lake City.

Two National Air Guard jets were scrambled after the private pilot radioed a report. But the strange machine eluded them in a swift vertical ascent.

The disc-shaped UFO was first seen by Waldo J. Harris, veteran pilot, as he taxied out for a take-off. Climbing toward the object, which was hovering at 6500-7000 feet, he closed in to about three miles.

"It appeared to be a large disc," Harris later reported. "It was shaped like a pair of saucers, one turned upside down on the other. The object was light gray, and it was at least 50 feet across and four feet thick. There were no visible openings, no trails or exhaust.

"I was about three miles from it when it suddenly moved upward, like an elevator." As the disc headed south, Harris pursued it. During the chase, he radioed the FAA tower at Salt Lake City's Municipal Airport that he had sighted a "flying saucer", relaying details through Utah Central and Provo Airports.

Because of the disc's speed, Harris temporarily lost contact, but he sighted the object again. Abruptly stopping, the UFO held position almost directly over the Utah Lake Omni Radio Station, as

mitter. (Omni-range is used to guide pilots on any selected course.)

"After hovering there," said Harris, "it moved straight up, then went west at an extremely accelerated speed. It disappeared in a few seconds."

Meantime, the flying disc and the chase by Harris were watched by seven observers at Utah Central Airport, including pilots Virgil S. Redmond and Clyde Card, the airport operators--Mr. and Mrs. Jay Galbraith--and aircraft mechanic Robert Butler. Seen through binoculars, the "saucer" appeared metallic, like dull aluminum. When it turned toward the sun it showed a brilliant reflecting light. Witnesses agreed on the disc's rocking motion when it hovered, and on its "terrific" acceleration.

AF investigator teams from Hill AFB questioned all observers, and a spokesman said it was the "best report from this area." No explanation was given for the sighting.

Unusual interest also was shown by the Navy. A separate investigation was made by Lieut. John Lee, Naval Intelligence.

Pilot Harris, revealing he had previously "made fun of people who saw flying saucers," released a public statement:

"I am sure from its performance that what I saw was a controlled craft. I now definitely believe these objects come from other planets."

TAB

- A Initial Report dtd 2 October, 1961
- B TWX from FTD Requesting Investigation
- C IR From Hill AFB dtd 9 October 1961
- D Transcription of Taped Interview with Observers
- E Dr Menzel Analysis (Extract from "World 66 Flying Saucers")
- F News Articles and Extracts from UFO Publications
- G Weather Data and Negative Balloon Report

DATA PROCESSING DIVISION
CLIMATIC CENTER, USAR
Air Weather Service (AATS)
Asheville, North Carolina

REPLY TO
ATTN OF: CCDDPD/HSSR

SUBJECT: Copies of Upper Air Observations

19 Dec 1961

TO: Air Force Technical Intelligence Center
Foreign Technology Division, TD-2
ATTN: Major Friend
Wright-Patterson AFB, Ohio

1. Reference: Your telephone request on 15 Dec 1961.
2. We are sending photocopies of adiabatic charts (WEAN-31 ABC) for radiosonde observations on 1-3 October 1961 at Salt Lake City, Utah.

FOR THE DIRECTOR

James R. DeCoster
JAMES R. DECOSTER
Chief, Data Processing Division

1 Atch
Data f/Salt Lake City

335-01

CLASSIFICATION (SECURITY INFORMATION when filled in)

AIR INTELLIGENCE EVALUATION RECORD

TO: Director of Intelligence Headquarters USAF ATTN: Collection Operations Div. Washington 25, D. C.	AIR INTELLIGENCE INFORMATION REPORT NUMBER	DATED
	SOURCE OF REPORT (Air Attache, Command, etc.)	
	INTELLIGENCE REPORT PREPARED BY (Name of officer)	

USABILITY OF REPORT	VALIDITY OF INFORMATION	FULFILLMENT OF REQUIREMENT
EXCELLENT	CONFIRMED	COMPLETE
SPECIFIC	PROBABLY TRUE	PARTIAL
USABLE	POSSIBLY TRUE	SLIGHT
TOO GENERAL	DOUBTFUL	
	CANNOT JUDGE	

COMMENTS (Keep the intelligence collectors informed. Your comments, guidance and criticism are greatly appreciated. Definite and detailed evaluation will lead to improvement in the quality of intelligence reporting).

Danner Hanson Field Report Neg
 Las Vegas 30 Sept nothing until 18-22-24
 No specific info. 12,000 at 400 200mi E of Cd
 Turn around period in High alt winds
 could be from Holloman
 GILDENBURG at Holloman
 Balloon Control center at 357-48

Winds in Sept change from E-W
 could lay in area before moving
 Oct Hi alt move swiftly to East
 prob drop down before moving out.
 poss radioonde

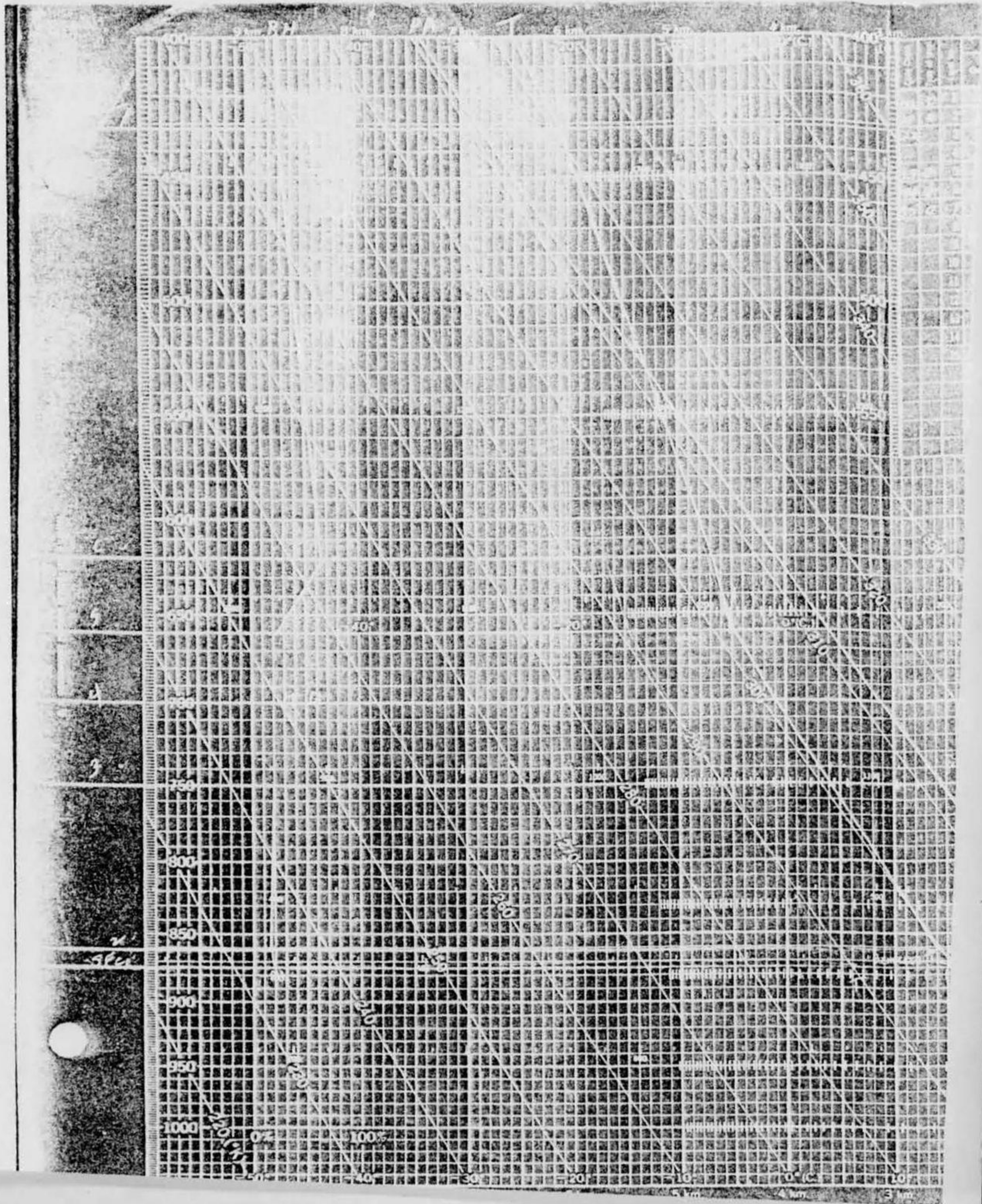
No Balloons in Area.

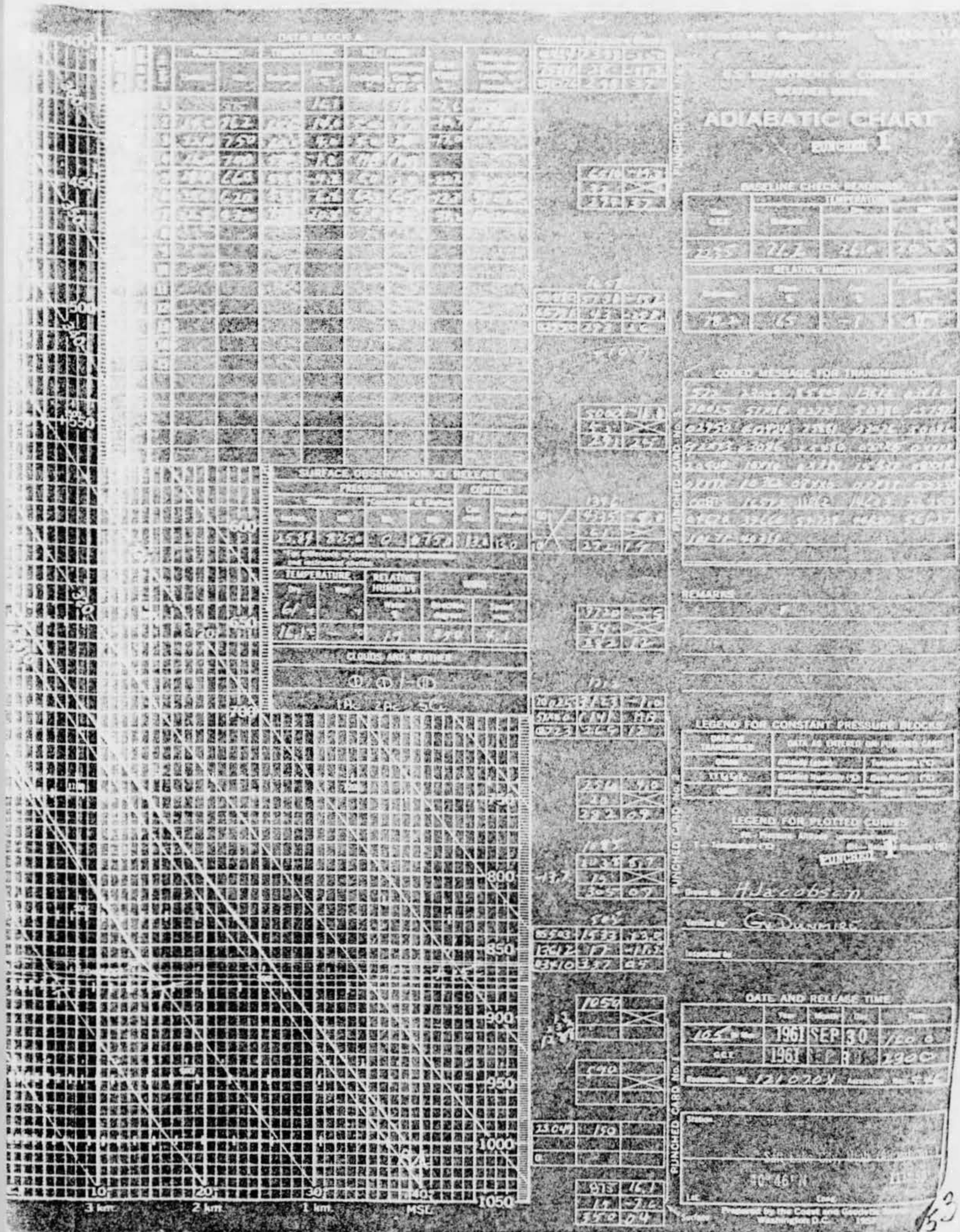
DATE	AGENCY AND OFFICE	ANALYST (Signature)
------	-------------------	---------------------

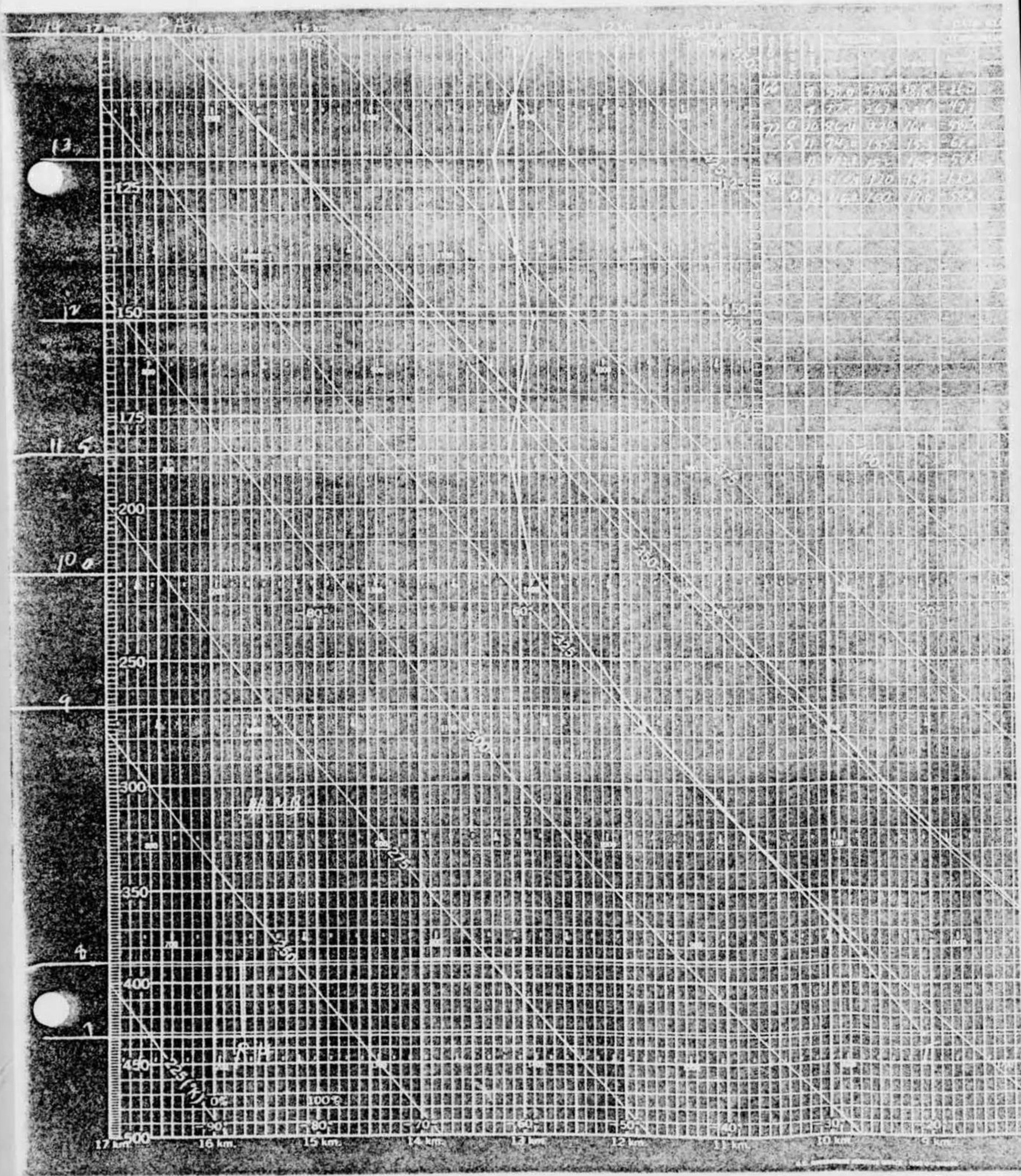
SALT LAKE CITY, UTAH
2 Oct 61

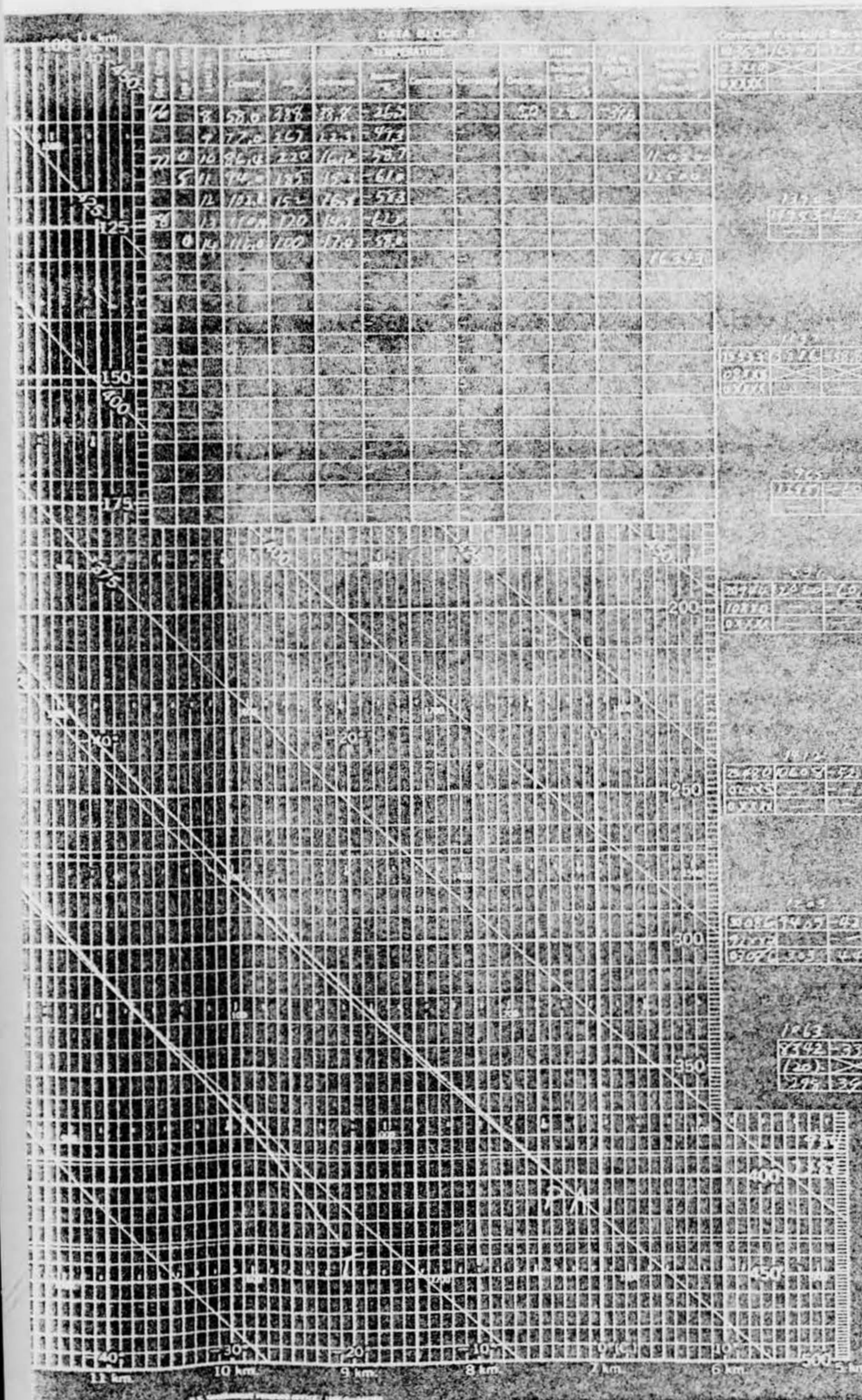
Case includes 21 ADIABATIC
CHARTS $\neq$

one tape recording (separate
folder)









U.S. DEPARTMENT OF COMMERCE
NATIONAL BUREAU OF METEOROLOGY
ADIABATIC CHART

DATA BLOCKS

Pressure (mb)	Temperature (°C)	Relative Humidity (%)	Mixing Ratio (g/kg)	Dew Point (°C)	Wet-Bulb (°C)	Wet-Bulb Depression (°C)	Wet-Bulb Equivalent (°C)
1000	20.0	78%	8.8	16.5	20.0	3.5	37.6
950	17.0	77%	8.2	15.1	17.0	3.9	36.1
900	14.0	76%	7.6	13.7	14.0	4.3	34.6
850	11.0	75%	7.0	12.3	11.0	4.7	33.1
800	8.0	74%	6.4	10.9	8.0	5.1	31.6
750	5.0	73%	5.8	9.5	5.0	5.5	30.1
700	2.0	72%	5.2	8.1	2.0	5.9	28.6
650	-1.0	71%	4.6	6.7	-1.0	6.3	27.1
600	-4.0	70%	4.0	5.3	-4.0	6.7	25.6
550	-7.0	69%	3.4	3.9	-7.0	7.1	24.1
500	-10.0	68%	2.8	2.5	-10.0	7.5	22.6
450	-13.0	67%	2.2	1.1	-13.0	7.9	21.1
400	-16.0	66%	1.6	-0.3	-16.0	8.3	19.6
350	-19.0	65%	1.0	-1.7	-19.0	8.7	18.1
300	-22.0	64%	0.4	-3.1	-22.0	9.1	16.6
250	-25.0	63%	-0.2	-4.5	-25.0	9.5	15.1
200	-28.0	62%	-0.8	-5.9	-28.0	9.9	13.6
150	-31.0	61%	-1.4	-7.3	-31.0	10.3	12.1
100	-34.0	60%	-2.0	-8.7	-34.0	10.7	10.6

CODED MESSAGE FOR TRANSMISSION

LEGEND FOR CONSTANT PRESSURE BLOCKS

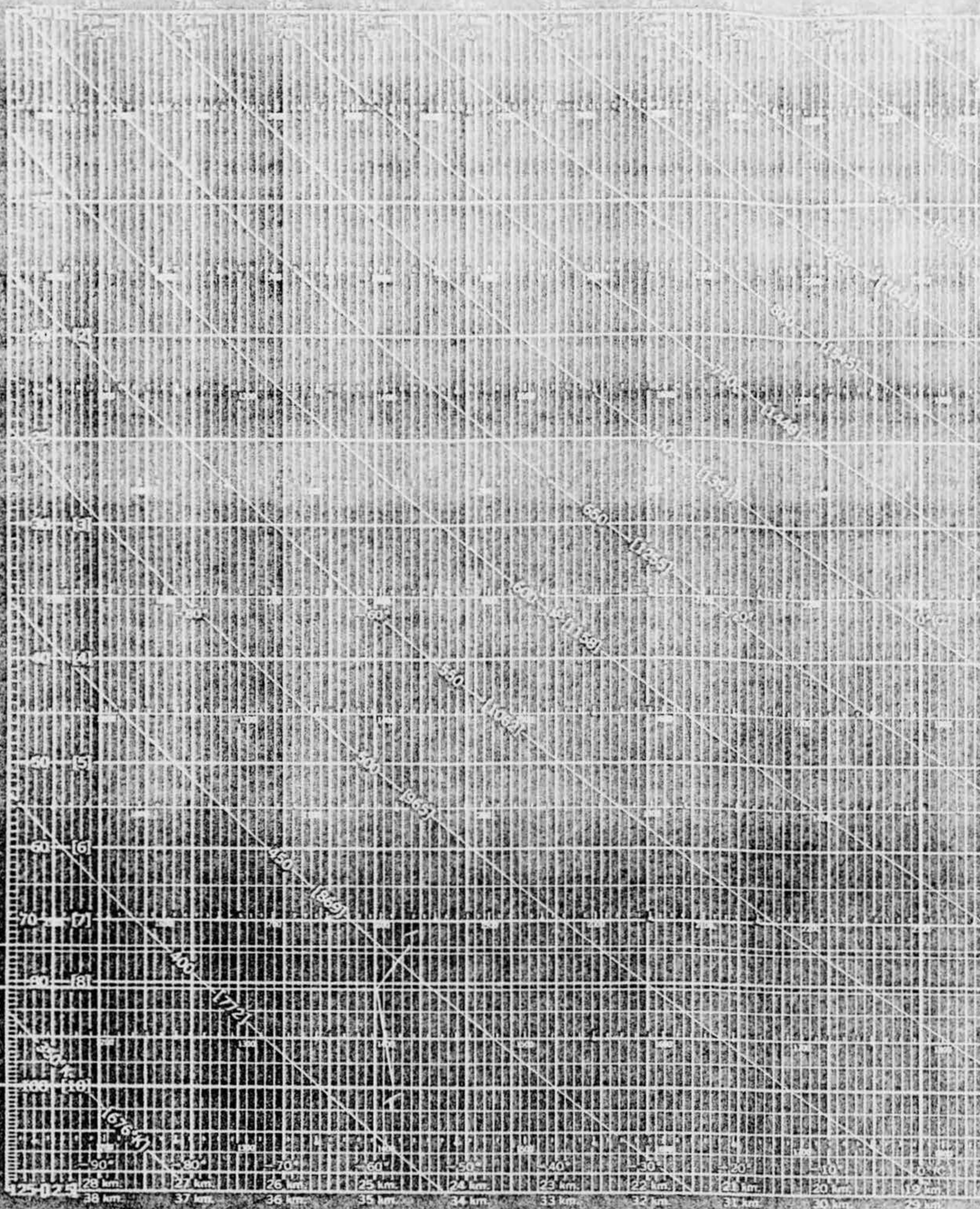
DATA AS TRANSMITTED	DATA AS ENTERED ON PUNCHED CARD
0000	0000
0001	0001
0002	0002
0003	0003
0004	0004
0005	0005
0006	0006
0007	0007
0008	0008
0009	0009
0010	0010
0011	0011
0012	0012
0013	0013
0014	0014
0015	0015
0016	0016
0017	0017
0018	0018
0019	0019
0020	0020
0021	0021
0022	0022
0023	0023
0024	0024
0025	0025
0026	0026
0027	0027
0028	0028
0029	0029
0030	0030
0031	0031
0032	0032
0033	0033
0034	0034
0035	0035
0036	0036
0037	0037
0038	0038
0039	0039
0040	0040
0041	0041
0042	0042
0043	0043
0044	0044
0045	0045
0046	0046
0047	0047
0048	0048
0049	0049
0050	0050
0051	0051
0052	0052
0053	0053
0054	0054
0055	0055
0056	0056
0057	0057
0058	0058
0059	0059
0060	0060
0061	0061
0062	0062
0063	0063
0064	0064
0065	0065
0066	0066
0067	0067
0068	0068
0069	0069
0070	0070
0071	0071
0072	0072
0073	0073
0074	0074
0075	0075
0076	0076
0077	0077
0078	0078
0079	0079
0080	0080
0081	0081
0082	0082
0083	0083
0084	0084
0085	0085
0086	0086
0087	0087
0088	0088
0089	0089
0090	0090
0091	0091
0092	0092
0093	0093
0094	0094
0095	0095
0096	0096
0097	0097
0098	0098
0099	0099

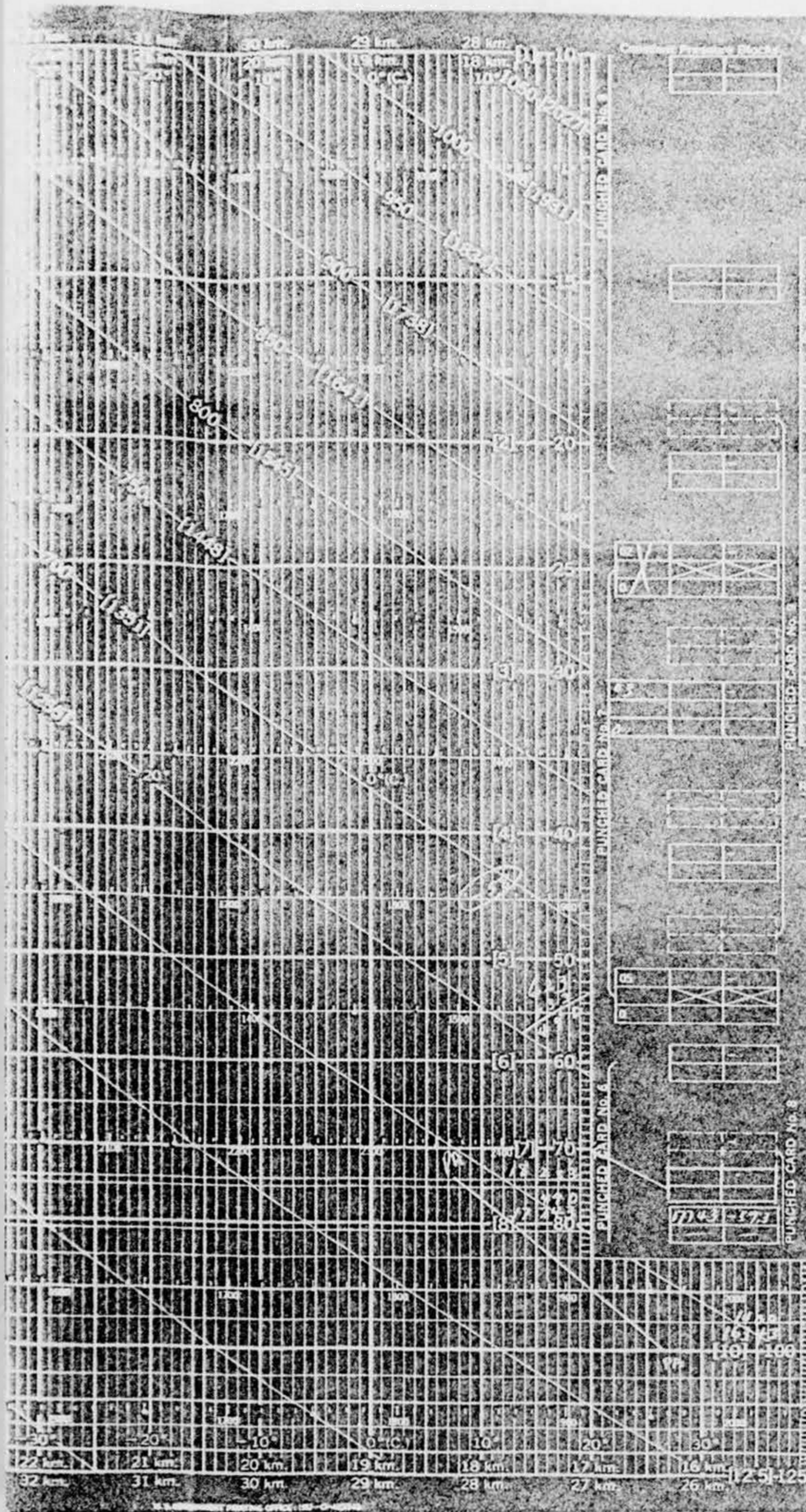
LEGEND FOR PLOTTED CURVES

DATE AND RELEASE TIME

DATE	TIME	RELEASE TIME
1961 SEP 30	1600	
1961 SEP 30	2200	

10-46-11 11-33-11





U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NOAA
ADIABATIC CHART

FORM NO. 1

DATA BLOCK 1

STATION	TIME	DATE	TIME	DATE	TIME	DATE	TIME	DATE
1	1000	1961	SEP	30	1000	1961	SEP	30
2	1000	1961	SEP	30	1000	1961	SEP	30
3	1000	1961	SEP	30	1000	1961	SEP	30
4	1000	1961	SEP	30	1000	1961	SEP	30
5	1000	1961	SEP	30	1000	1961	SEP	30
6	1000	1961	SEP	30	1000	1961	SEP	30
7	1000	1961	SEP	30	1000	1961	SEP	30
8	1000	1961	SEP	30	1000	1961	SEP	30
9	1000	1961	SEP	30	1000	1961	SEP	30
10	1000	1961	SEP	30	1000	1961	SEP	30

REMARKS

LEGEND FOR CONSTANT PRESSURE BLOCKS

DATA IS TRANSMITTED	DATA IS NOT TRANSMITTED
TEMPERATURE	TEMPERATURE
WIND	WIND
WIND	WIND
WIND	WIND

LEGEND FOR PLOTTED CURVES

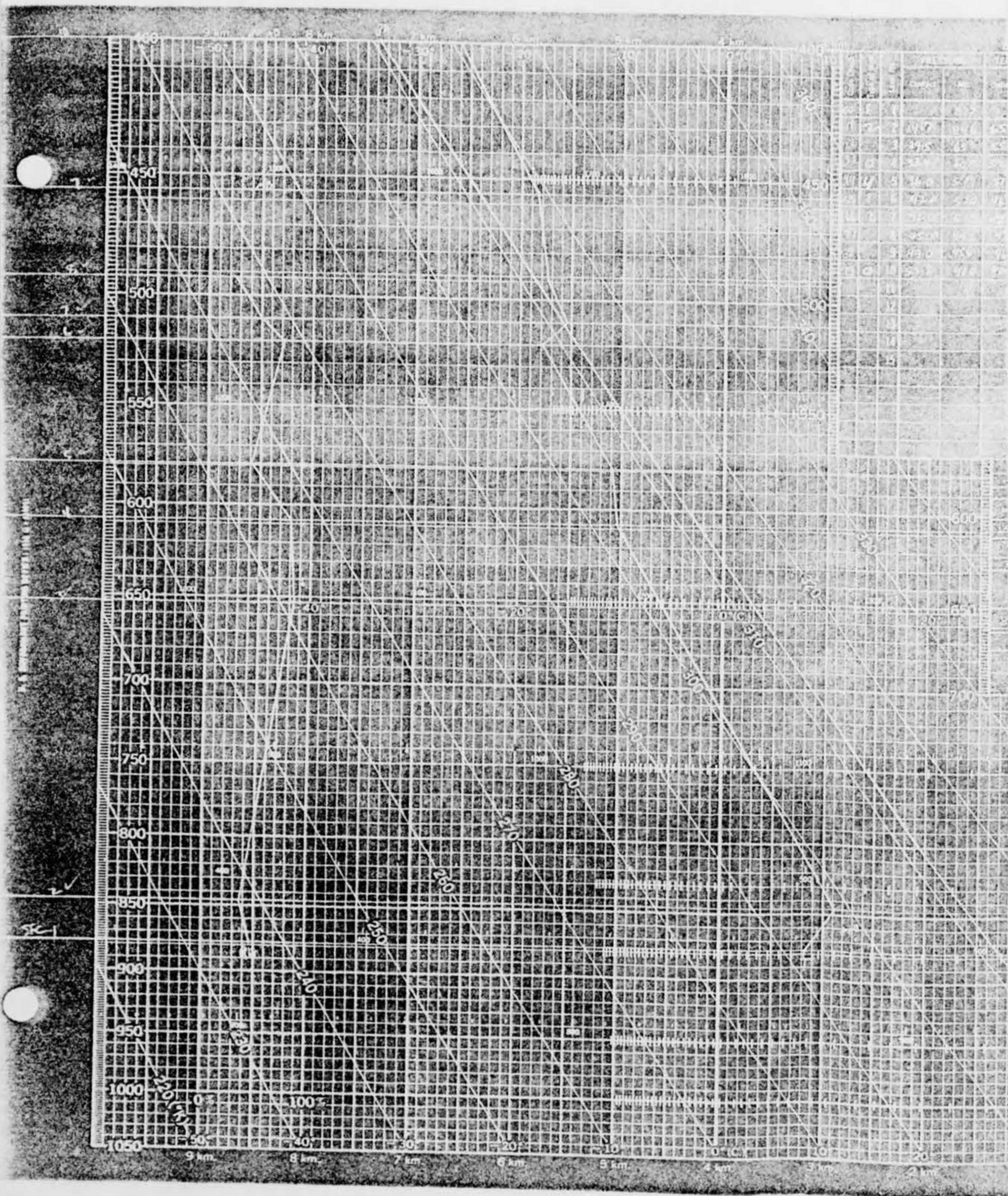
1 - Temperature
2 - Humidity
3 - Mixing Ratio
4 - Dry Adiabats
5 - Saturated Vapor Pressure
6 - Saturated Vapor Pressure
7 - Saturated Vapor Pressure
8 - Saturated Vapor Pressure
9 - Saturated Vapor Pressure
10 - Saturated Vapor Pressure

Drawn by: H. J. Jacobson
 Verified by: G. D. Smith
 Checked by: W. J. Smith

DATE AND RELEASE TIME

DATE	TIME	DATE	TIME
1961	SEP 30	1961	SEP 30
1961	SEP 30	1961	SEP 30

San Luis Obispo, California
 10° 40' N 121° 50' W
 Prepared by the Office of Oceanographic Services
 November 1960



DEPARTMENT OF THE AIR FORCE
STAFF MESSAGE BRANCH
UNCLASSIFIED MESSAGE

AF IN : 16127 (2 Oct 61)

INCOMING

G/rjp

ACTION : CIN-17

INFO : OOP-2, OOP-CP-1, SAFS-3 (24)

01
3

SMB B 055

KZCHGD993ZCQJC883

PP RJEZHQ

DE RJWZNL 3

ZNR

P 022240Z

FM COMDR 3635TH FLYTNGWG STEAD AFB

TO RJWFAL/ADC ENT AFB

RJWZSB/28TH AIR DIV HAMILTON AFB

RJEDSQ/ATIC WPAFB

RJEZHQ/HQ USAF WASH DC

RJEZHQ/OSAF WASH DC

BT

UNCLAS 16 K

UFO
File
@

FOR USAF AFCIN, OSAF SAFIS, UFO: A. DESCRIPTION OF THE OBJECT:

1. THE SHAPE CIRCULAR, NO TAIL SURFACE, 25 FT DIAMETER AND OBLMNG.

2. A WING SPAN OF 30 FT. ONE HALF AS LONG AS MOONY-MARK 20A.

E3. THE COLOR IS LIGHT GRAY. 4. ONE. 5. ONE. 6. THICKER IN THE
MIDDLE, TWO SAUCERS UPSIDE--DOWN ON EACH OTHER. 7. NONE.

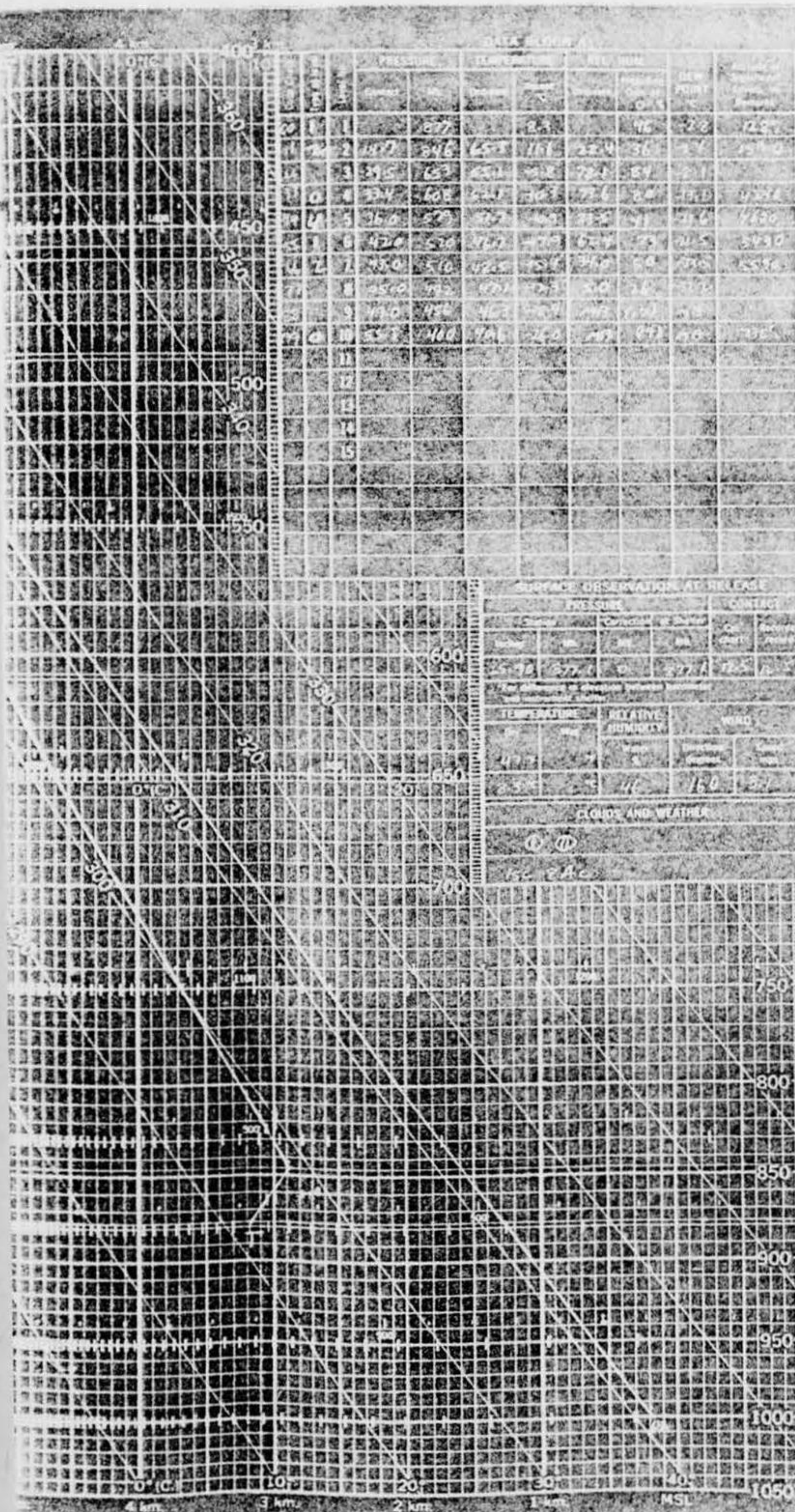
8. NONE. 9. NONE. B. DESCRIPTION OF COURSE OF OBJECT: 1. LIGHT

SPOT IN THE SKY STANDING DEAD STILL. 2. 22 DEGREES ABOVE HORIZON.

AIRCRAFT SPOTTED AT 600 FEET ABOVE SURFACE. 3. ANGULAR 250 DEGREE

HEADING 4. WENT STRAIGHT UP, TURNED SOUTH AND WENT WEST. 5. FADED

7



U.S. DEPARTMENT OF COMMERCE
NATIONAL WEATHER SERVICE

ADIABATIC CHART

FIGURE 1

STATION DATA

STATION	NAME	NO.
DATE	TIME	

STATION DATA

STATION	NAME	NO.
DATE	TIME	

CODED MESSAGE FOR TRANSMISSION

STATION	NAME	NO.
DATE	TIME	

REMARKS

LEGEND FOR CONSTANT PRESSURE BLOCK

DATA AS TRANSMITTED	DATA AS ENTERED ON PUNCHED CARD
TEMP	TEMP
REL HUM	REL HUM
WIND	WIND
WIND DIR	WIND DIR
WIND SPD	WIND SPD

LEGEND FOR PLOTTED CURVES

TEMP	TEMP
REL HUM	REL HUM
WIND	WIND
WIND DIR	WIND DIR
WIND SPD	WIND SPD

DATE AND RELEASE TIME

DATE	TIME
------	------

STATION DATA

STATION	NAME	NO.
DATE	TIME	

STATION DATA

STATION	NAME	NO.
DATE	TIME	

STATION DATA

STATION	NAME	NO.
DATE	TIME	

STATION DATA

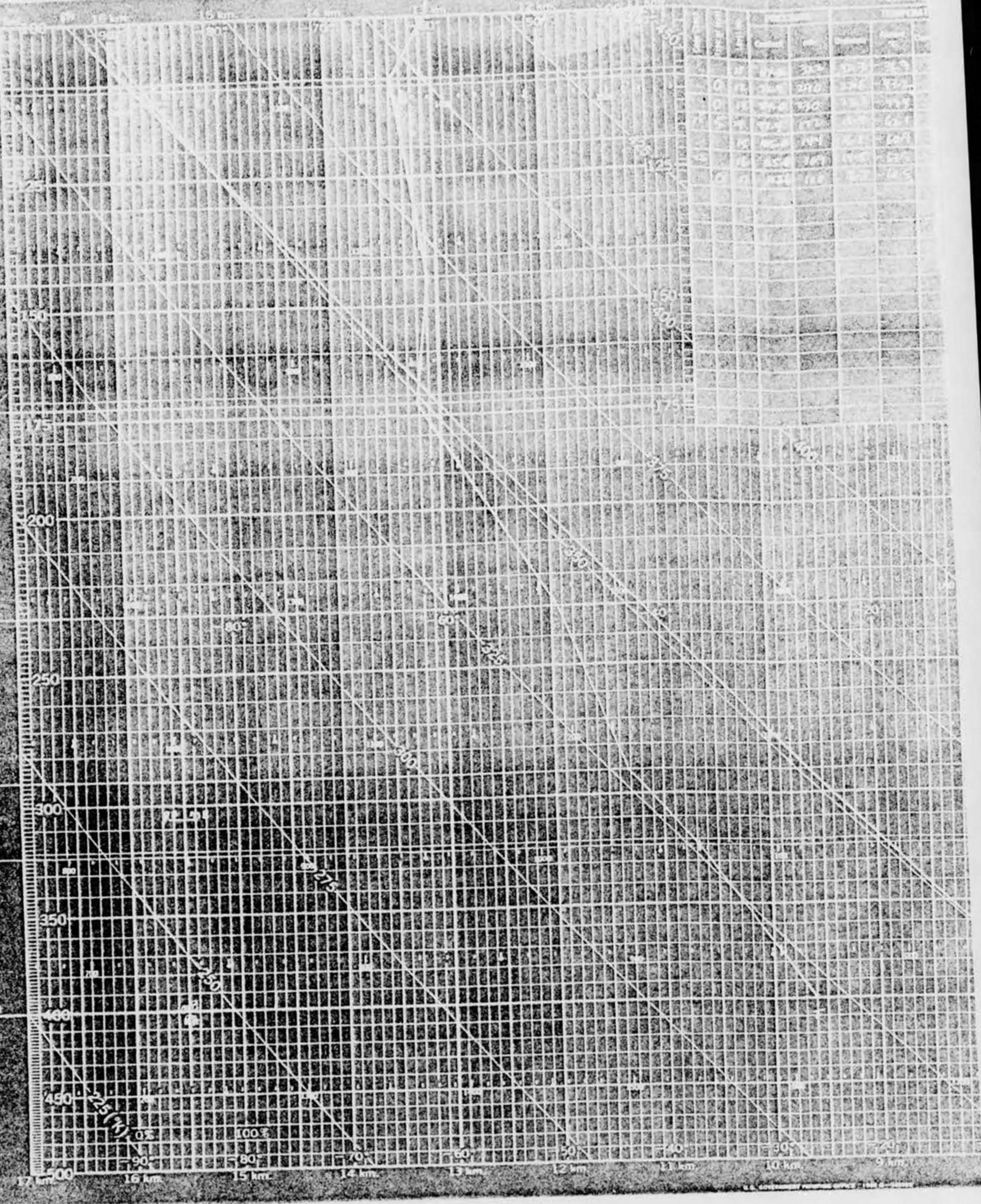
STATION	NAME	NO.
DATE	TIME	

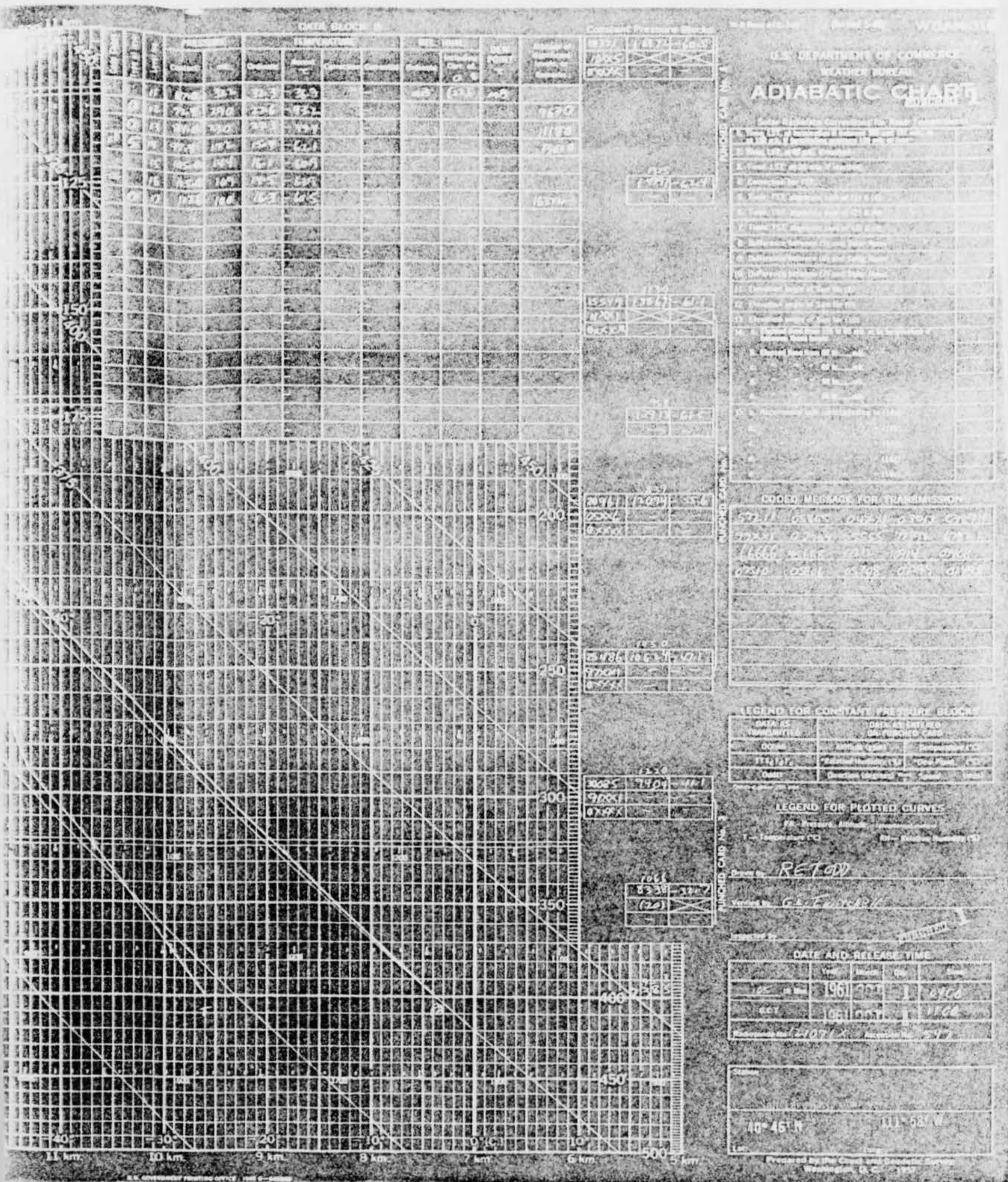
STATION DATA

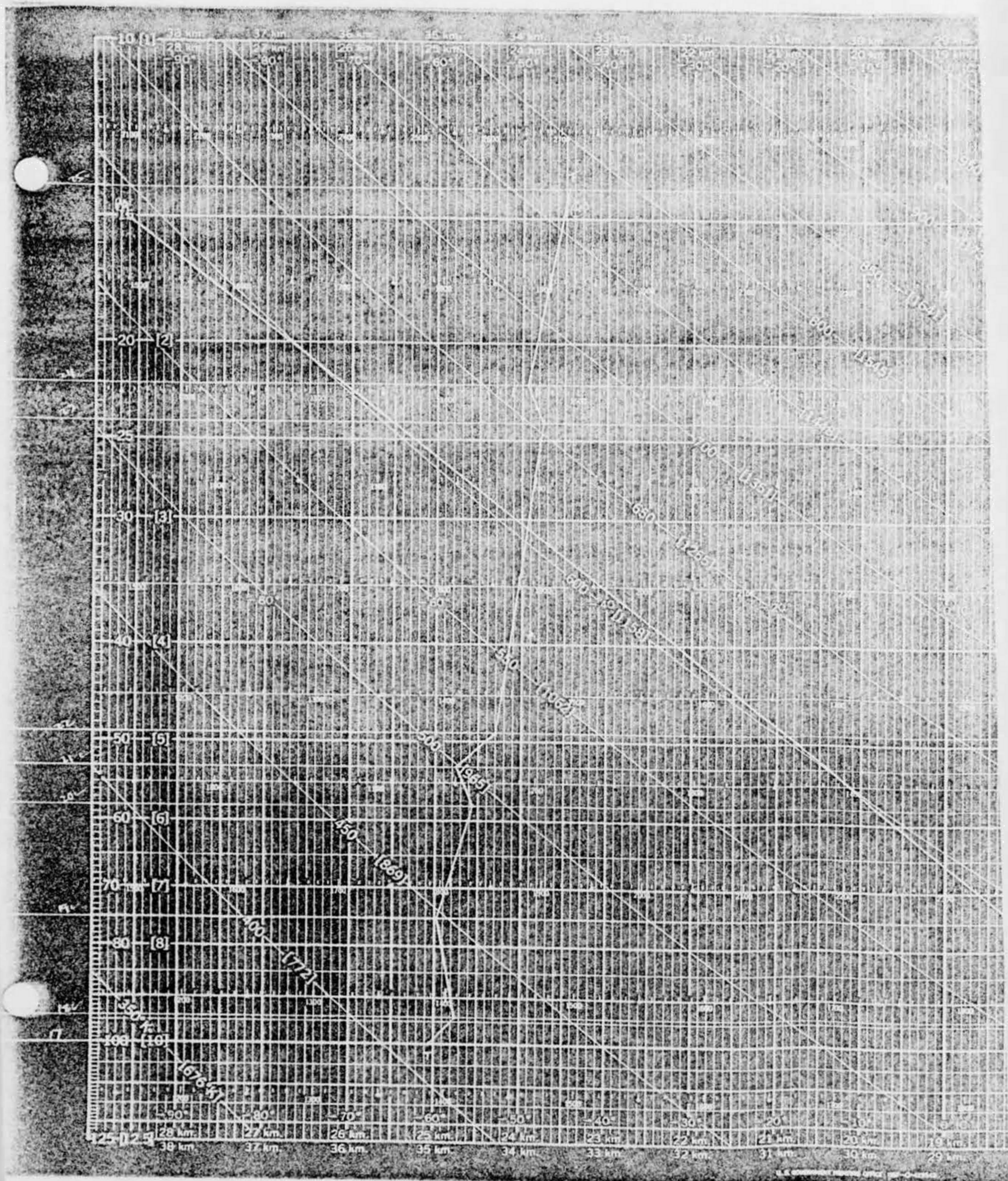
STATION	NAME	NO.
DATE	TIME	

STATION DATA

STATION	NAME	NO.
DATE	TIME	







1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, 26

DATA BLOCK C

This figure displays a large grid of 100 small grayscale images, arranged in 10 rows and 10 columns. Each image shows a handwritten digit (0-9) in various styles, sizes, and orientations, illustrating the variability in human handwriting. The digits are written on a light, textured background, and the grid is used to visualize the input data for a machine learning model.

REMARKS

LEGEND FOR CONSTANT PRESSURE

PAUL W. HARRIS President 10000 15th St. N.E. Seattle, WA 98125 206/325-1100	PAUL W. HARRIS President 10000 15th St. N.E. Seattle, WA 98125 206/325-1100	PAUL W. HARRIS President 10000 15th St. N.E. Seattle, WA 98125 206/325-1100
--	--	--

LEGEND FOR PLOTTED CURVES

1997

Drawn by RE TADD

Verified by: G. L. W. T. (T. K. T.)

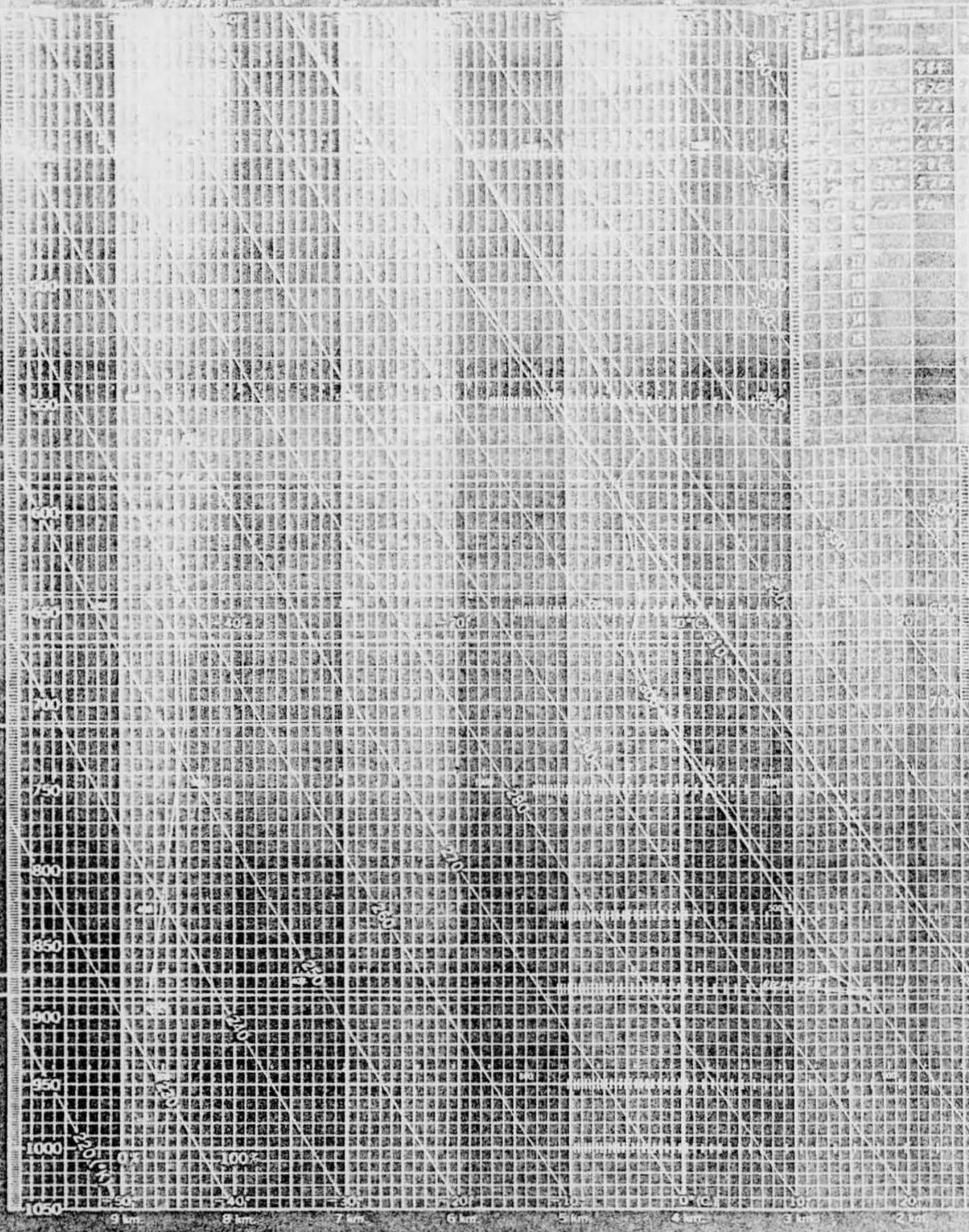
Inspected by _____

DATE AND RELEASE TIME

1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	2101	2102	2103	2104	2105	2106	2107	2108	2109	2110	2111	2112	2113	2114	2115	2116	2117	2118	2119	2120	2121	2122	2123	2124	2125	2126	2127	2128	2129	2130	2131	2132	2133	2134	2135	2136	2137	2138	2139	2140	2141	2142	2143	2144	2145	2146	2147	2148	2149	2150	2151	2152	2153	2154	2155	2156	2157	2158	2159	2160	2161	2162	2163	2164	2165	2166	2167	2168	2169	2170	2171	2172	2173	2174	2175	2176	2177	2178	2179	2180	2181	2182	2183	2184	2185	2186	2187	2188	2189	2190	2191	2192	2193	2194	2195	2196	2197	2198	2199	2200	2201	2202	2203	2204	2205	2206	2207	2208	2209	2210	2211	2212	2213	2214	2215	2216	2217	2218	2219	2220	2221	2222	2223	2224	2225	2226	2227	2228	2229	2230	2231	2232	2233	2234	2235	2236	2237	2238	2239	2240	2241	2242	2243	2244	2245	2246	2247	2248	2249	2250	2251	2252	2253	2254	2255	2256	2257	2258	2259	2260	2261	2262	2263	2264	2265	2266	2267	2268	2269	2270	2271	2272	2273	2274	2275	2276	2277	2278	2279	2280	2281	2282	2283	2284	2285	2286	2287	2288	2289	2290	2291	2292	2293	2294	2295	2296	2297	2298	2299	2300	2301	2302	2303	2304	2305	2306	2307	2308	2309	2310	2311	2312	2313	2314	2315	2316	2317	2318	2319	2320	2321	2322	2323	2324	2325	2326	2327	2328	2329	2330	2331	2332	2333	2334	2335	2336	2337	2338	2339	2340	2341	2342	2343	2344	2345	2346	2347	2348	2349	2350	2351	2352	2353	2354	2355	2356	2357	2358	2359	2360	2361	2362	2363	2364	2365	2366	2367	2368	2369	2370	2371	2372	2373	2374	2375	2376	2377	2378	2379	2380	2381	2382	2383	2384	2385	2386	2387	2388	2389	2390	2391	2392	2393	2394	2395	2396	2397	2398	2399	2400	2401	2402	2403	2404	2405	2406	2407	2408	2409	2410	2411	2412	2413	2414	2415	2416	2417	2418	2419	2420	2421	2422	2423	2424	2425	2426	2427	2428	2429	2430	2431	2432	2433	2434	2435	2436	2437	2438	2439	2440	2441	2442	2443	2444	2445	2446	2447	2448	2449	2450	2451	2452	2453	2454	2455	2456	2457	2458	2459	2460	2461	2462	2463	2464	2465	2466	2467	2468	2469	2470	2471	2472	2473	2474	2475	2476	2477	2478	2479	2480	2481	2482	2483	2484	2485	2486	2487	2488	2489	2490	2491	2492	2493	2494	2495	2496	2497	2498	2499	2500	2501	2502	2503	2504	2505	2506	2507	2508	2509	2510	2511	2512	2513	2514	2515	2516	2517	2518	2519	2520	2521	2522	2523	2524	2525	2526	2527	2528	2529	2530	2531	2532	2533	2534	2535	2536	2537	2538	2539	2540	2541	2542	2543	2544	2545	2546	2547	2548	2549	2550	2551	2552	2553	2554	2555	2556	2557	2558	2559	2560	2561	2562	2563	2564	2565	2566	2567	2568	2569	2570	2571	2572	2573	2574	2575	2576	2577	2578	2579	2580	2581	2582	2583	2584	2585	2586	2587	2588	2589	2590	2591	2592	2593	2594	2595	2596	2597	2598	2599	2600	2601	2602	2603	2604	2605	2606	2607	2608	2609	2610	2611	2612	2613	2614	2615	2616	2617	2618	2619	2620	2621	2622	2623	2624	2625	2626	2627	2628	2629	2630	2631	2632	2633	2634	2635	2636	2637	2638	2639	2640	2641	2642	2643	2644	2645	2646	2647	2648	2649	2650	2651	2652	2653	2654	2655	2656	2657	2658	2659	2660	2661	2662	2663	2664	2665	2666	2667	2668	2669	2670	2671	2672	2673	2674	2675	2676	2677	2678	2679	2680	2681	2682	2683	2684	2685	2686	2687	2688	2689	2690	2691	2692	2693	2694	2695	2696	2697	2698	2699	2700	2701	2702	2703	2704	2705	2706	2707	2708	2709	2710	2711	2712	2713	2714	2715	2716	2717	2718	2719	2720	2721	2722	2723	2724	2725	2726	2727	2728	2729	2730	2731	2732	2733	2734	2735	2736	2737	2738	2739	2740	2741	2742	2743	2744	2745	2746	2747	2748	2749	2750	2751	2752	2753	2754	2755	2756	2757	2758	2759	2760	2761	2762	2763	2764	2765	2766	2767	2768	2769	2770	2771	2772	2773	2774	2775	2776	2777	2778	2779	2780	2781	2782	2783	2784	2785	2786	2787	2788	2789	2790	2791	2792	2793	2794	2795	2796	2797	2798	2799	2800	2801	2802	2803	2804	2805	2806	2807	2808	2809	2810	2811	2812	2813	2814	2815	2816	2817	2818	2819	2820	2821	2822	2823	2824	2825	2826	2827	2828	2829	2830	2831	2832	2833	2834	2835	2836	2837	2838	2839	2840	2841	2842	2843	2844	2845	2846	2847	2848	2849	2850	2851	2852	2853	2854	2855	2856	2857	2858	2859	2860	2861	2862	2863	2864	2865	2866	2867	2868	2869	2870	2871	2872	2873	2874	2875	2876	2877	2878	2879	2880	2881	2882	2883	2884	2885	2886	2887	2888	2889	2890	2891	2892	2893	2894	2895	2896	2897	2898	2899	2900	2901	2902	2903	2904	2905	2906	2907	2908	2909	2910	2911	2912	2913	2914	2915	2916	2917	2918	2919	2920	2921	2922	2923	2924	2925	2926	2927	2928	2929	2930	2931	2932	2933	2934	2935	2936	2937	2938	2939	2940	2941	2942	2943	2944	2945	2946	2947	2948	2949	2950	2951	2952	2953	2954	2955	2956	2957	2958	2959	2960	2961	2962	2963	2964	2965	2966	2967	2968	2969	2970	2971	2972	2973	2974	2975	2976	2977	2978	2979	2980	2981	2982	2983	2984	2985	2986	2987	2988	2989	2990	2991	2992	2993	2994	2995	2996	2997	2998	2999	3000
------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------

Salinity	30-46 ‰	31-34 ‰
----------	---------	---------

1990



1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, 26

1921 1922 1923 1924 1925 1926 1927 1928 1929 1930
 1931 1932 1933 1934 1935 1936 1937 1938 1939 1940
 1941 1942 1943 1944 1945 1946 1947 1948 1949 1950
 1951 1952 1953 1954 1955 1956 1957 1958 1959 1960
 1961 1962 1963 1964 1965 1966 1967 1968 1969 1970
 1971 1972 1973 1974 1975 1976 1977 1978 1979 1980
 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990
 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000
 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010
 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020
 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030

1990

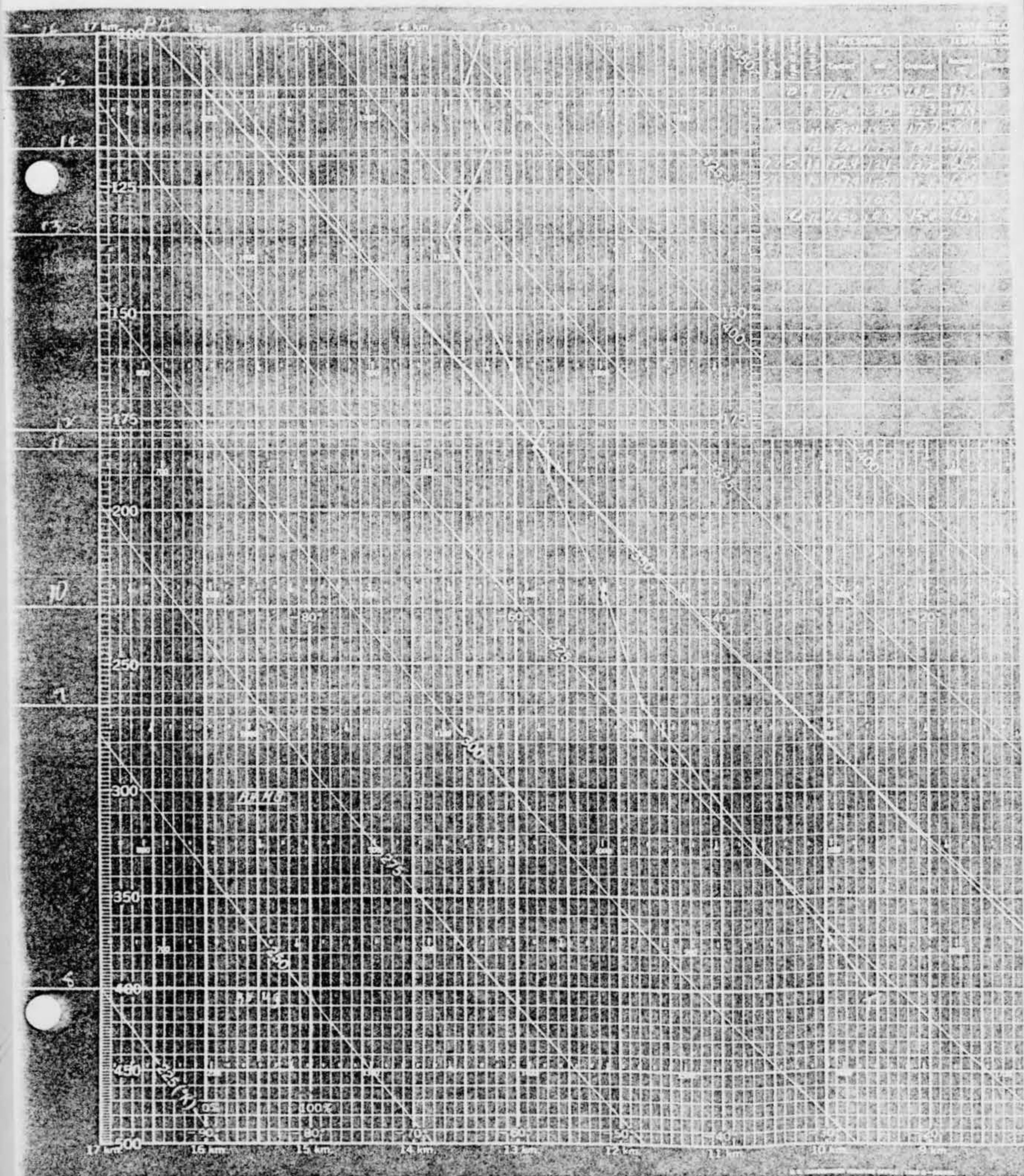
5-11-72 165822

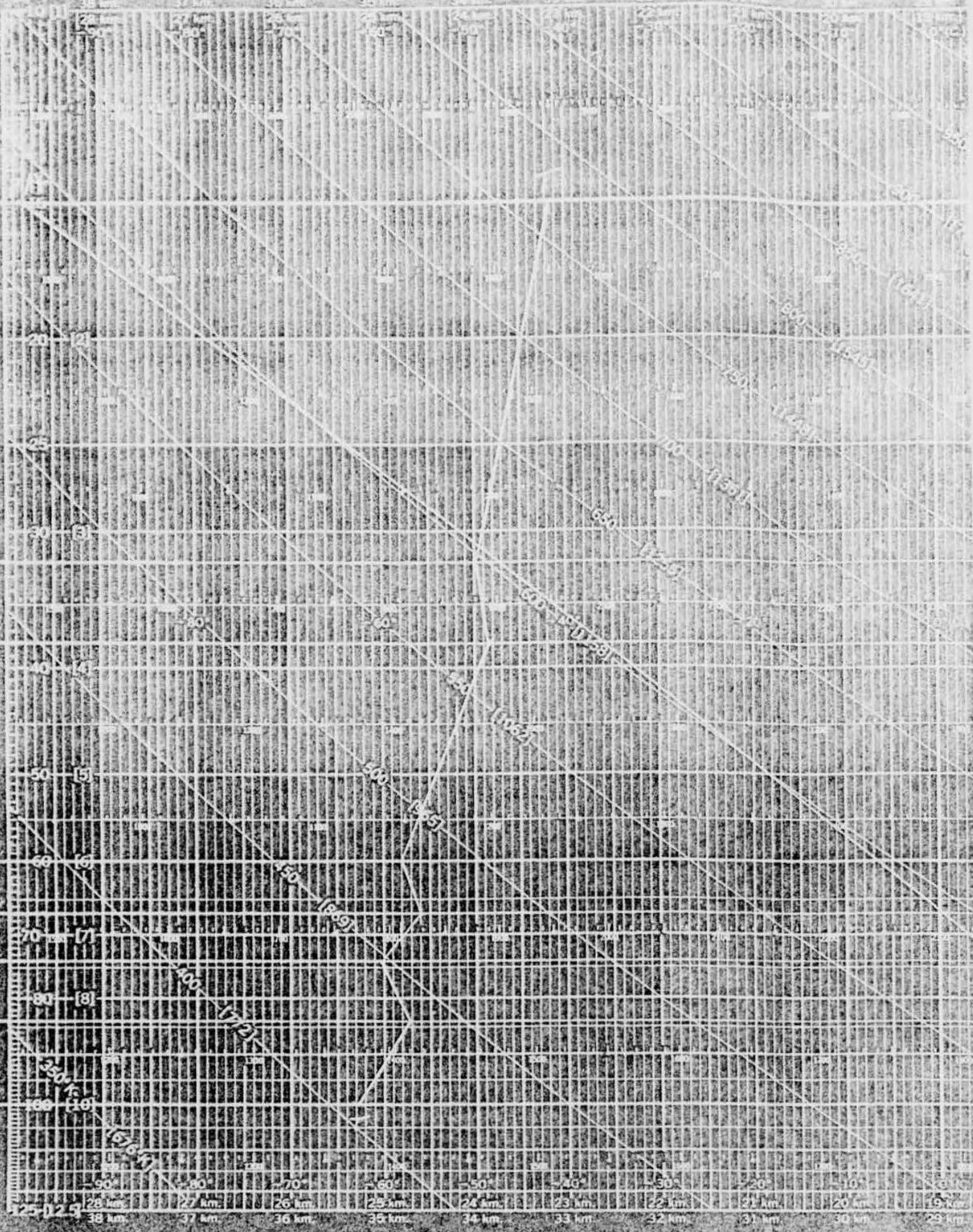
Woods Griffiths

1915	1916	1917	1918	1919
1920	1921	1922	1923	1924
1925	1926	1927	1928	1929
1930	1931	1932	1933	1934
1935	1936	1937	1938	1939
1940	1941	1942	1943	1944
1945	1946	1947	1948	1949
1950	1951	1952	1953	1954
1955	1956	1957	1958	1959
1960	1961	1962	1963	1964
1965	1966	1967	1968	1969
1970	1971	1972	1973	1974
1975	1976	1977	1978	1979
1980	1981	1982	1983	1984
1985	1986	1987	1988	1989
1990	1991	1992	1993	1994
1995	1996	1997	1998	1999
2000	2001	2002	2003	2004
2005	2006	2007	2008	2009
2010	2011	2012	2013	2014
2015	2016	2017	2018	2019
2020	2021	2022	2023	2024
2025	2026	2027	2028	2029
2030	2031	2032	2033	2034
2035	2036	2037	2038	2039
2040	2041	2042	2043	2044
2045	2046	2047	2048	2049
2050	2051	2052	2053	2054
2055	2056	2057	2058	2059
2060	2061	2062	2063	2064
2065	2066	2067	2068	2069
2070	2071	2072	2073	2074
2075	2076	2077	2078	2079
2080	2081	2082	2083	2084
2085	2086	2087	2088	2089
2090	2091	2092	2093	2094
2095	2096	2097	2098	2099
2100	2101	2102	2103	2104
2105	2106	2107	2108	2109
2110	2111	2112	2113	2114
2115	2116	2117	2118	2119
2120	2121	2122	2123	2124
2125	2126	2127	2128	2129
2130	2131	2132	2133	2134
2135	2136	2137	2138	2139
2140	2141	2142	2143	2144
2145	2146	2147	2148	2149
2150	2151	2152	2153	2154
2155	2156	2157	2158	2159
2160	2161	2162	2163	2164
2165	2166	2167	2168	2169
2170	2171	2172	2173	2174
2175	2176	2177	2178	2179
2180	2181	2182	2183	2184
2185	2186	2187	2188	2189
2190	2191	2192	2193	2194
2195	2196	2197	2198	2199
2200	2201	2202	2203	2204
2205	2206	2207	2208	2209
2210	2211	2212	2213	2214
2215	2216	2217	2218	2219
2220	2221	2222	2223	2224
2225	2226	2227	2228	2229
2230	2231	2232	2233	2234
2235	2236	2237	2238	2239
2240	2241	2242	2243	2244
2245	2246	2247	2248	2249
2250	2251	2252	2253	2254
2255	2256	2257	2258	2259
2260	2261	2262	2263	2264
2265	2266	2267	2268	2269
2270	2271	2272	2273	

0

1990





AF IN : 16127 (2) 61)

DEPARTMENT OF THE AIR FORCE
STAFF MESSAGE BRANCH
UNCLASSIFIED MESSAGE

pg 2 of 2

INCOMINC

PAGE TWO RJWZNL 3

OUT GOING SOUTHWEST 6. FIRST TIME IS FR TWO MINUTES-SECOND TIME TWO MINUTES. AIRCRAFT WITHIN 3 TO 5 UMILES OF OBJECT.

C. MANNER OF OBSERVATION: 1 FLYING PERSONNEL AND GROUND OBSERVERS.

2. BINOCULARS USED BY THE GROUND OBSERVERS. THERE WERE EIGHT GROUND OBSERVERS. 3. MOONY-MARK 20A, NR 8393E, ALTITUDE FROM RUNWAY UP TO 6,000 FT, HEADING 180 DEGREES, SPEED 140 KNOT, HOME STATION UTAH CENTRAL AIRPORT, PROVOST, UTAH.

D. TIME AND DATE OF SIGHTING: 1905 ZULU, 2 OCT 61 E. UTAH CENTRAL

AIRPORT F. IDENTIFYING INFORMATION ON OBSERVERS: 1. [REDACTED]

AGE 44, [REDACTED], SALT LAKE CITY, UTAH: JOB REALESTATE, FIRST CLASS SPECIALIST MACHINIST, [REDACTED] SCHOOL. 2. [REDACTED],

[REDACTED] BOTH OBSERVERS ARE FAMILIAR WITH ALL TYPES AIRCRAFT.; 2.; :03-4, BRIGHT. WIND FROM NORTH 20-30 KNOT.

H. NEGATIVE. I. NEGATIVE. J. BALLOON RELEASED TWO HOURS PREVIOUS FROM SALT LAKE CITY, UTAH, WITH BQPAFOOT DIAMETER . K. THE OBSERVER CTAIM APPEARANCE OF POSITIVE CONTROL PLUS RAPID ACCELERATION AND CLIMB. OBSERVERS FAMILIAR WITH ALL TYPES AIRCRAFT.

BT

230100Z UOCT RJWZNL

8

U.S. DEPARTMENT OF COMMERCE
NATIONAL BUREAU OF METEOROLOGY
ADIABATIC CHART

STATION	TIME	PRESSURE		TEMPERATURE		WIND	WAVE	SEA	STATE
		Obs	Red	Obs	Red				
1	15	100	100	15	15				
2	16	100	100	16	16				
3	17	100	100	17	17				
4	18	100	100	18	18				
5	19	100	100	19	19				
6	20	100	100	20	20				
7	21	100	100	21	21				
8	22	100	100	22	22				
9	23	100	100	23	23				
10	24	100	100	24	24				
11	25	100	100	25	25				
12	26	100	100	26	26				
13	27	100	100	27	27				
14	28	100	100	28	28				
15	29	100	100	29	29				
16	30	100	100	30	30				
17	31	100	100	31	31				
18	32	100	100	32	32				
19	33	100	100	33	33				
20	34	100	100	34	34				
21	35	100	100	35	35				
22	36	100	100	36	36				
23	37	100	100	37	37				
24	38	100	100	38	38				
25	39	100	100	39	39				
26	40	100	100	40	40				
27	41	100	100	41	41				
28	42	100	100	42	42				
29	43	100	100	43	43				
30	44	100	100	44	44				
31	45	100	100	45	45				
32	46	100	100	46	46				
33	47	100	100	47	47				
34	48	100	100	48	48				
35	49	100	100	49	49				
36	50	100	100	50	50				
37	51	100	100	51	51				
38	52	100	100	52	52				
39	53	100	100	53	53				
40	54	100	100	54	54				
41	55	100	100	55	55				
42	56	100	100	56	56				
43	57	100	100	57	57				
44	58	100	100	58	58				
45	59	100	100	59	59				
46	60	100	100	60	60				
47	61	100	100	61	61				
48	62	100	100	62	62				
49	63	100	100	63	63				
50	64	100	100	64	64				
51	65	100	100	65	65				
52	66	100	100	66	66				
53	67	100	100	67	67				
54	68	100	100	68	68				
55	69	100	100	69	69				
56	70	100	100	70	70				
57	71	100	100	71	71				
58	72	100	100	72	72				
59	73	100	100	73	73				
60	74	100	100	74	74				
61	75	100	100	75	75				
62	76	100	100	76	76				
63	77	100	100	77	77				
64	78	100	100	78	78				
65	79	100	100	79	79				
66	80	100	100	80	80				
67	81	100	100	81	81				
68	82	100	100	82	82				
69	83	100	100	83	83				
70	84	100	100	84	84				
71	85	100	100	85	85				
72	86	100	100	86	86				
73	87	100	100	87	87				
74	88	100	100	88	88				
75	89	100	100	89	89				
76	90	100	100	90	90				
77	91	100	100	91	91				
78	92	100	100	92	92				
79	93	100	100	93	93				
80	94	100	100	94	94				
81	95	100	100	95	95				
82	96	100	100	96	96				
83	97	100	100	97	97				
84	98	100	100	98	98				
85	99	100	100	99	99				
86	100	100	100	100	100				

REMARKS:

LEGEND FOR CONSTANT PRESSURE BLOCKS			
AREA AS TRANSMITTED	DATA AS RECEIVED	AREA AS TRANSMITTED	DATA AS RECEIVED
100	100	100	100
100	100	100	100
100	100	100	100

LEGEND FOR PLOTTED CURVES:
 (1) - Pressure (2) - Temperature
 (3) - Wind (4) - Wave (5) - Sea (6) - State

NAME: H. J. ...
 TITLE: ...
 ORGANIZATION: ...

DATE AND RELEASE TIME			
1/5	1961	10	100
1/5	1961	10	100
1/5	1961	10	100

Signature: ...
 Title: ...
 Date: ...

STATION: ...

TIME: ...

PRESSURE: ...

TEMPERATURE: ...

WIND: ...

WAVE: ...

SEA: ...

STATE: ...

REMARKS: ...

DATE: ...

TIME: ...

PRESSURE: ...

TEMPERATURE: ...

WIND: ...

WAVE: ...

SEA: ...

STATE: ...

REMARKS: ...

DATE: ...

TIME: ...

PRESSURE: ...

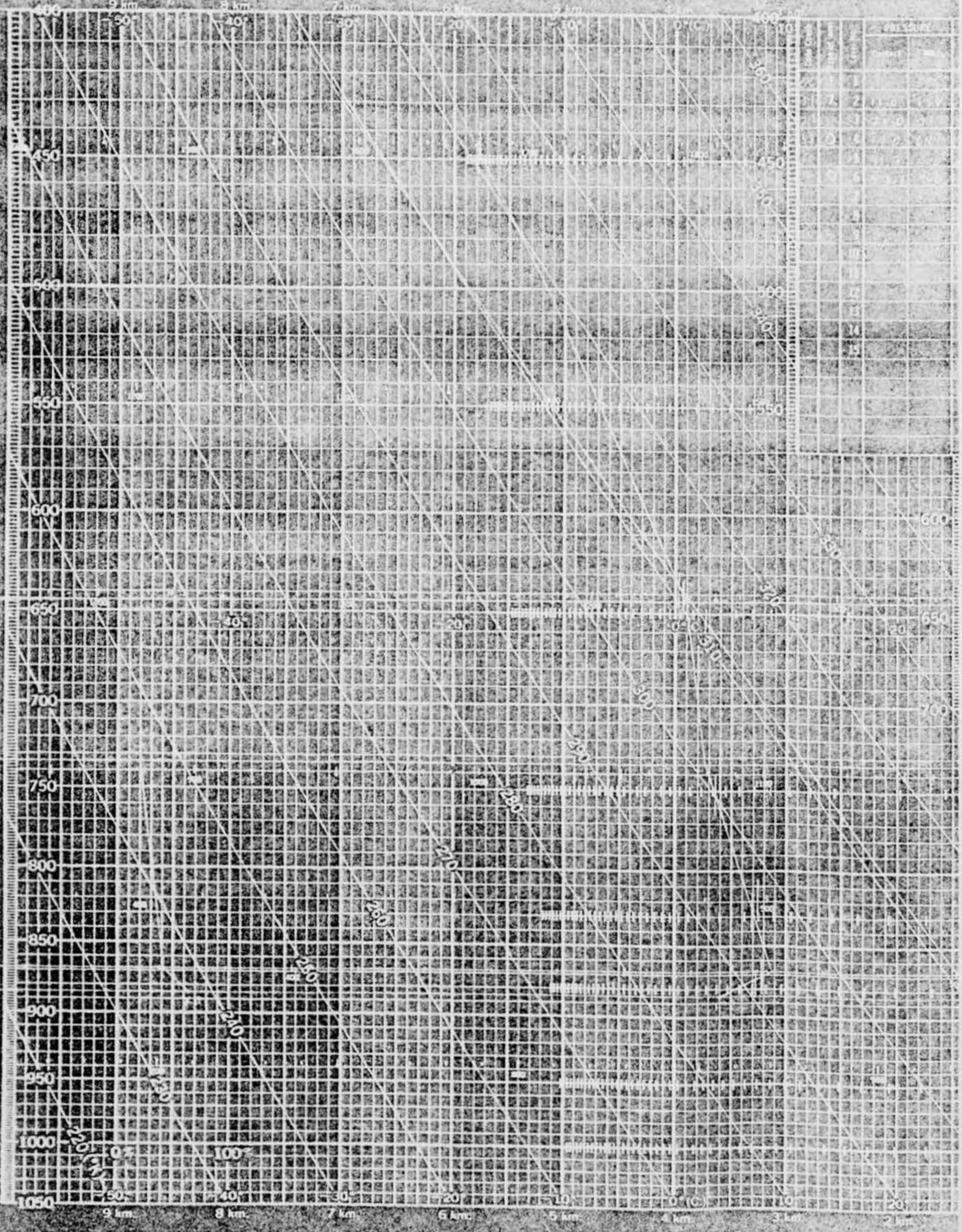
TEMPERATURE: ...

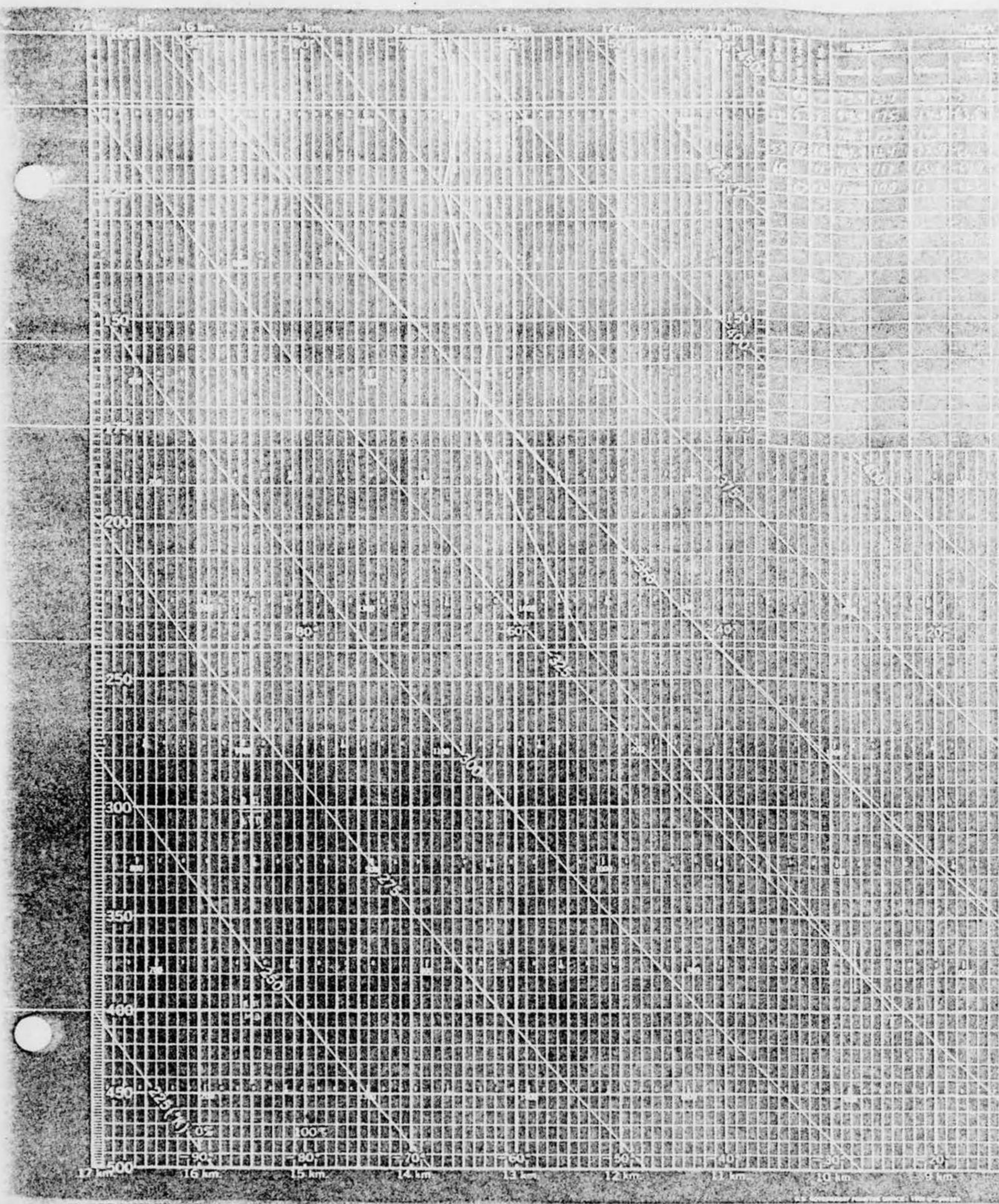
WIND: ...

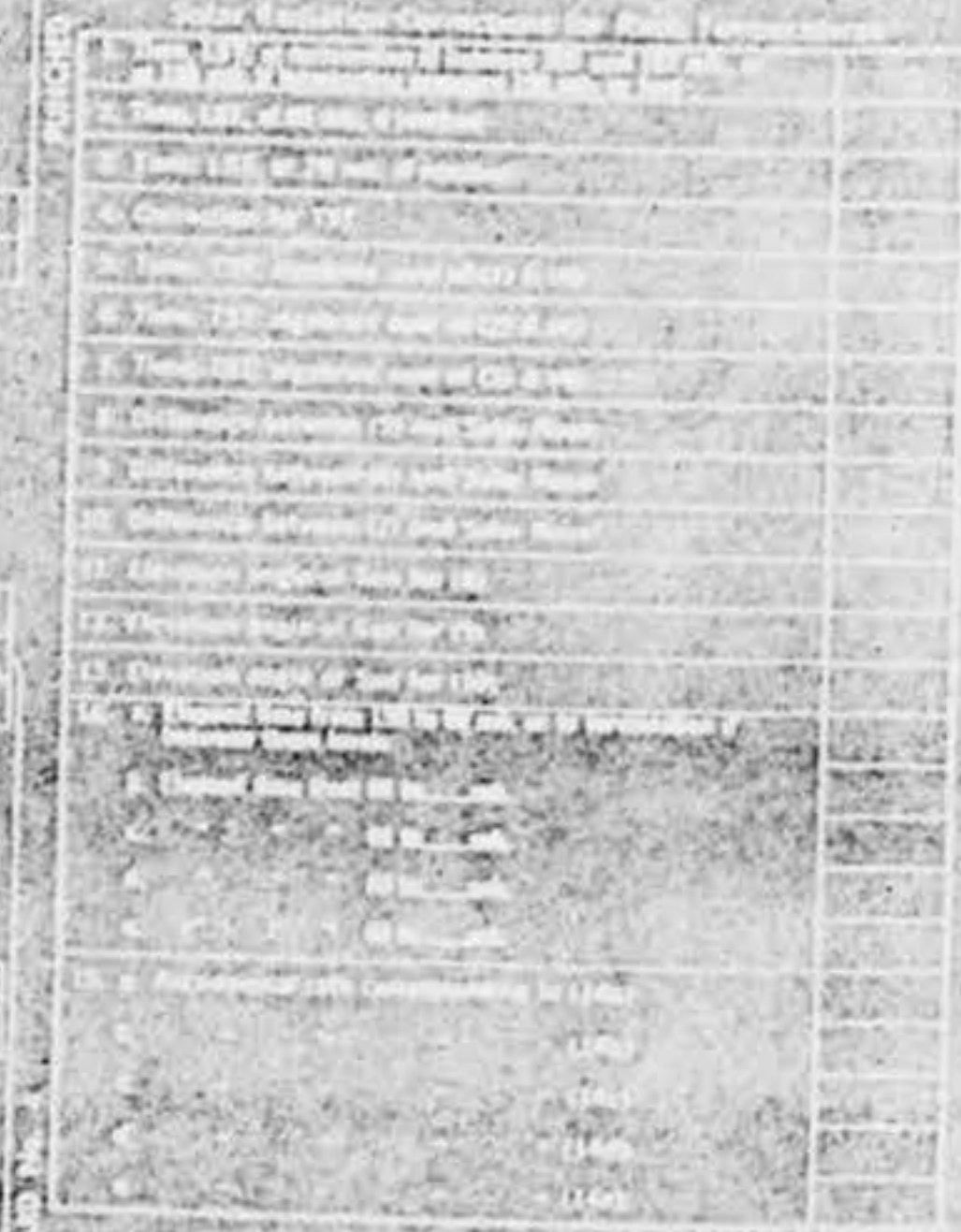
WAVE: ...

SEA: ...

STATE: ...







CODED MESSAGE FOR TRANSMISSION

1. *Chrysomelidae*
 2. *Chrysomelidae*
 3. *Chrysomelidae*
 4. *Chrysomelidae*
 5. *Chrysomelidae*
 6. *Chrysomelidae*
 7. *Chrysomelidae*
 8. *Chrysomelidae*
 9. *Chrysomelidae*
 10. *Chrysomelidae*
 11. *Chrysomelidae*
 12. *Chrysomelidae*
 13. *Chrysomelidae*
 14. *Chrysomelidae*
 15. *Chrysomelidae*
 16. *Chrysomelidae*
 17. *Chrysomelidae*
 18. *Chrysomelidae*
 19. *Chrysomelidae*
 20. *Chrysomelidae*
 21. *Chrysomelidae*
 22. *Chrysomelidae*
 23. *Chrysomelidae*
 24. *Chrysomelidae*
 25. *Chrysomelidae*
 26. *Chrysomelidae*
 27. *Chrysomelidae*
 28. *Chrysomelidae*
 29. *Chrysomelidae*
 30. *Chrysomelidae*
 31. *Chrysomelidae*
 32. *Chrysomelidae*
 33. *Chrysomelidae*
 34. *Chrysomelidae*
 35. *Chrysomelidae*
 36. *Chrysomelidae*
 37. *Chrysomelidae*
 38. *Chrysomelidae*
 39. *Chrysomelidae*
 40. *Chrysomelidae*
 41. *Chrysomelidae*
 42. *Chrysomelidae*
 43. *Chrysomelidae*
 44. *Chrysomelidae*
 45. *Chrysomelidae*
 46. *Chrysomelidae*
 47. *Chrysomelidae*
 48. *Chrysomelidae*
 49. *Chrysomelidae*
 50. *Chrysomelidae*
 51. *Chrysomelidae*
 52. *Chrysomelidae*
 53. *Chrysomelidae*
 54. *Chrysomelidae*
 55. *Chrysomelidae*
 56. *Chrysomelidae*
 57. *Chrysomelidae*
 58. *Chrysomelidae*
 59. *Chrysomelidae*
 60. *Chrysomelidae*
 61. *Chrysomelidae*
 62. *Chrysomelidae*
 63. *Chrysomelidae*
 64. *Chrysomelidae*
 65. *Chrysomelidae*
 66. *Chrysomelidae*
 67. *Chrysomelidae*
 68. *Chrysomelidae*
 69. *Chrysomelidae*
 70. *Chrysomelidae*
 71. *Chrysomelidae*
 72. *Chrysomelidae*
 73. *Chrysomelidae*
 74. *Chrysomelidae*
 75. *Chrysomelidae*
 76. *Chrysomelidae*
 77. *Chrysomelidae*
 78. *Chrysomelidae*
 79. *Chrysomelidae*
 80. *Chrysomelidae*
 81. *Chrysomelidae*
 82. *Chrysomelidae*
 83. *Chrysomelidae*
 84. *Chrysomelidae*
 85. *Chrysomelidae*
 86. *Chrysomelidae*
 87. *Chrysomelidae*
 88. *Chrysomelidae*
 89. *Chrysomelidae*
 90. *Chrysomelidae*
 91. *Chrysomelidae*
 92. *Chrysomelidae*
 93. *Chrysomelidae*
 94. *Chrysomelidae*
 95. *Chrysomelidae*
 96. *Chrysomelidae*
 97. *Chrysomelidae*
 98. *Chrysomelidae*
 99. *Chrysomelidae*
 100. *Chrysomelidae*

LEGEND FOR CONSTANT-PRESSURE BLOCKS			
DATA AS TRANSMITTED	DATA AS EDITED		
Comments	Comments	Comments	Comments
11-17-77	11-17-77	11-17-77	11-17-77
11-17-77	11-17-77	11-17-77	11-17-77

LEGEND FOR PLOTTED CURVES

7.5 Percent Moisture Δ 10 Percent Moisture

1.5 Percent Moisture $\square$ 15 Percent Moisture

2.5 Percent Moisture $\circ$ 20 Percent Moisture

3.5 Percent Moisture $\times$ 25 Percent Moisture

4.5 Percent Moisture $\bullet$ 30 Percent Moisture

5.5 Percent Moisture ∇ 35 Percent Moisture

6.5 Percent Moisture $\diamond$ 40 Percent Moisture

7.5 Percent Moisture $\star$ 45 Percent Moisture

8.5 Percent Moisture $\dagger$ 50 Percent Moisture

9.5 Percent Moisture $\circ$ 55 Percent Moisture

10.5 Percent Moisture $\times$ 60 Percent Moisture

11.5 Percent Moisture $\bullet$ 65 Percent Moisture

12.5 Percent Moisture ∇ 70 Percent Moisture

13.5 Percent Moisture $\diamond$ 75 Percent Moisture

14.5 Percent Moisture $\star$ 80 Percent Moisture

15.5 Percent Moisture $\dagger$ 85 Percent Moisture

16.5 Percent Moisture $\circ$ 90 Percent Moisture

17.5 Percent Moisture $\times$ 95 Percent Moisture

18.5 Percent Moisture $\bullet$ 100 Percent Moisture

19.5 Percent Moisture ∇ 105 Percent Moisture

20.5 Percent Moisture $\diamond$ 110 Percent Moisture

21.5 Percent Moisture $\star$ 115 Percent Moisture

22.5 Percent Moisture $\dagger$ 120 Percent Moisture

23.5 Percent Moisture $\circ$ 125 Percent Moisture

24.5 Percent Moisture $\times$ 130 Percent Moisture

25.5 Percent Moisture $\bullet$ 135 Percent Moisture

26.5 Percent Moisture ∇ 140 Percent Moisture

27.5 Percent Moisture $\diamond$ 145 Percent Moisture

28.5 Percent Moisture $\star$ 150 Percent Moisture

29.5 Percent Moisture $\dagger$ 155 Percent Moisture

30.5 Percent Moisture $\circ$ 160 Percent Moisture

31.5 Percent Moisture $\times$ 165 Percent Moisture

32.5 Percent Moisture $\bullet$ 170 Percent Moisture

33.5 Percent Moisture ∇ 175 Percent Moisture

34.5 Percent Moisture $\diamond$ 180 Percent Moisture

35.5 Percent Moisture $\star$ 185 Percent Moisture

36.5 Percent Moisture $\dagger$ 190 Percent Moisture

37.5 Percent Moisture $\circ$ 195 Percent Moisture

38.5 Percent Moisture $\times$ 200 Percent Moisture

39.5 Percent Moisture $\bullet$ 205 Percent Moisture

40.5 Percent Moisture ∇ 210 Percent Moisture

41.5 Percent Moisture $\diamond$ 215 Percent Moisture

42.5 Percent Moisture $\star$ 220 Percent Moisture

43.5 Percent Moisture $\dagger$ 225 Percent Moisture

44.5 Percent Moisture $\circ$ 230 Percent Moisture

45.5 Percent Moisture $\times$ 235 Percent Moisture

46.5 Percent Moisture $\bullet$ 240 Percent Moisture

47.5 Percent Moisture ∇ 245 Percent Moisture

48.5 Percent Moisture $\diamond$ 250 Percent Moisture

49.5 Percent Moisture $\star$ 255 Percent Moisture

50.5 Percent Moisture $\dagger$ 260 Percent Moisture

51.5 Percent Moisture $\circ$ 265 Percent Moisture

52.5 Percent Moisture $\times$ 270 Percent Moisture

53.5 Percent Moisture $\bullet$ 275 Percent Moisture

54.5 Percent Moisture ∇ 280 Percent Moisture

55.5 Percent Moisture $\diamond$ 285 Percent Moisture

56.5 Percent Moisture $\star$ 290 Percent Moisture

57.5 Percent Moisture $\dagger$ 295 Percent Moisture

58.5 Percent Moisture $\circ$ 300 Percent Moisture

59.5 Percent Moisture $\times$ 305 Percent Moisture

60.5 Percent Moisture $\bullet$ 310 Percent Moisture

61.5 Percent Moisture ∇ 315 Percent Moisture

62.5 Percent Moisture $\diamond$ 320 Percent Moisture

63.5 Percent Moisture $\star$ 325 Percent Moisture

64.5 Percent Moisture $\dagger$ 330 Percent Moisture

65.5 Percent Moisture $\circ$ 335 Percent Moisture

66.5 Percent Moisture $\times$ 340 Percent Moisture

67.5 Percent Moisture $\bullet$ 345 Percent Moisture

68.5 Percent Moisture ∇ 350 Percent Moisture

69.5 Percent Moisture $\diamond$ 355 Percent Moisture

70.5 Percent Moisture $\star$ 360 Percent Moisture

71.5 Percent Moisture $\dagger$ 365 Percent Moisture

72.5 Percent Moisture $\circ$ 370 Percent Moisture

73.5 Percent Moisture $\times$ 375 Percent Moisture

74.5 Percent Moisture $\bullet$ 380 Percent Moisture

75.5 Percent Moisture ∇ 385 Percent Moisture

76.5 Percent Moisture $\diamond$ 390 Percent Moisture

77.5 Percent Moisture $\star$ 395 Percent Moisture

78.5 Percent Moisture $\dagger$ 400 Percent Moisture

79.5 Percent Moisture $\circ$ 405 Percent Moisture

80.5 Percent Moisture $\times$ 410 Percent Moisture

81.5 Percent Moisture $\bullet$ 415 Percent Moisture

82.5 Percent Moisture ∇ 420 Percent Moisture

83.5 Percent Moisture $\diamond$ 425 Percent Moisture

84.5 Percent Moisture $\star$ 430 Percent Moisture

85.5 Percent Moisture $\dagger$ 435 Percent Moisture

86.5 Percent Moisture $\circ$ 440 Percent Moisture

87.5 Percent Moisture $\times$ 445 Percent Moisture

88.5 Percent Moisture $\bullet$ 450 Percent Moisture

89.5 Percent Moisture ∇ 455 Percent Moisture

90.5 Percent Moisture $\diamond$ 460 Percent Moisture

91.5 Percent Moisture $\star$ 465 Percent Moisture

92.5 Percent Moisture $\dagger$ 470 Percent Moisture

93.5 Percent Moisture $\circ$ 475 Percent Moisture

94.5 Percent Moisture $\times$ 480 Percent Moisture

95.5 Percent Moisture $\bullet$ 485 Percent Moisture

96.5 Percent Moisture ∇ 490 Percent Moisture

97.5 Percent Moisture $\diamond$ 495 Percent Moisture

98.5 Percent Moisture $\star$ 500 Percent Moisture

99.5 Percent Moisture $\dagger$ 505 Percent Moisture

100.5 Percent Moisture $\circ$ 510 Percent Moisture

101.5 Percent Moisture $\times$ 515 Percent Moisture

102.5 Percent Moisture $\bullet$ 520 Percent Moisture

103.5 Percent Moisture ∇ 525 Percent Moisture

104.5 Percent Moisture $\diamond$ 530 Percent Moisture

105.5 Percent Moisture $\star$ 535 Percent Moisture

106.5 Percent Moisture $\dagger$ 540 Percent Moisture

107.5 Percent Moisture $\circ$ 545 Percent Moisture

108.5 Percent Moisture $\times$ 550 Percent Moisture

109.5 Percent Moisture $\bullet$ 555 Percent Moisture

110.5 Percent Moisture ∇ 560 Percent Moisture

111.5 Percent Moisture $\diamond$ 565 Percent Moisture

112.5 Percent Moisture $\star$ 570 Percent Moisture

113.5 Percent Moisture $\dagger$ 575 Percent Moisture

114.5 Percent Moisture $\circ$ 580 Percent Moisture

115.5 Percent Moisture $\times$ 585 Percent Moisture

116.5 Percent Moisture $\bullet$ 590 Percent Moisture

117.5 Percent Moisture ∇ 595 Percent Moisture

118.5 Percent Moisture $\diamond$ 600 Percent Moisture

119.5 Percent Moisture $\star$ 605 Percent Moisture

120.5 Percent Moisture $\dagger$ 610 Percent Moisture

121.5 Percent Moisture $\circ$ 615 Percent Moisture

122.5 Percent Moisture $\times$ 620 Percent Moisture

123.5 Percent Moisture $\bullet$ 625 Percent Moisture

124.5 Percent Moisture ∇ 630 Percent Moisture

125.5 Percent Moisture $\diamond$ 635 Percent Moisture

126.5 Percent Moisture $\star$ 640 Percent Moisture

127.5 Percent Moisture $\dagger$ 645 Percent Moisture

128.5 Percent Moisture $\circ$ 650 Percent Moisture

129.5 Percent Moisture $\times$ 655 Percent Moisture

130.5 Percent Moisture $\bullet$ 660 Percent Moisture

131.5 Percent Moisture ∇ 665 Percent Moisture

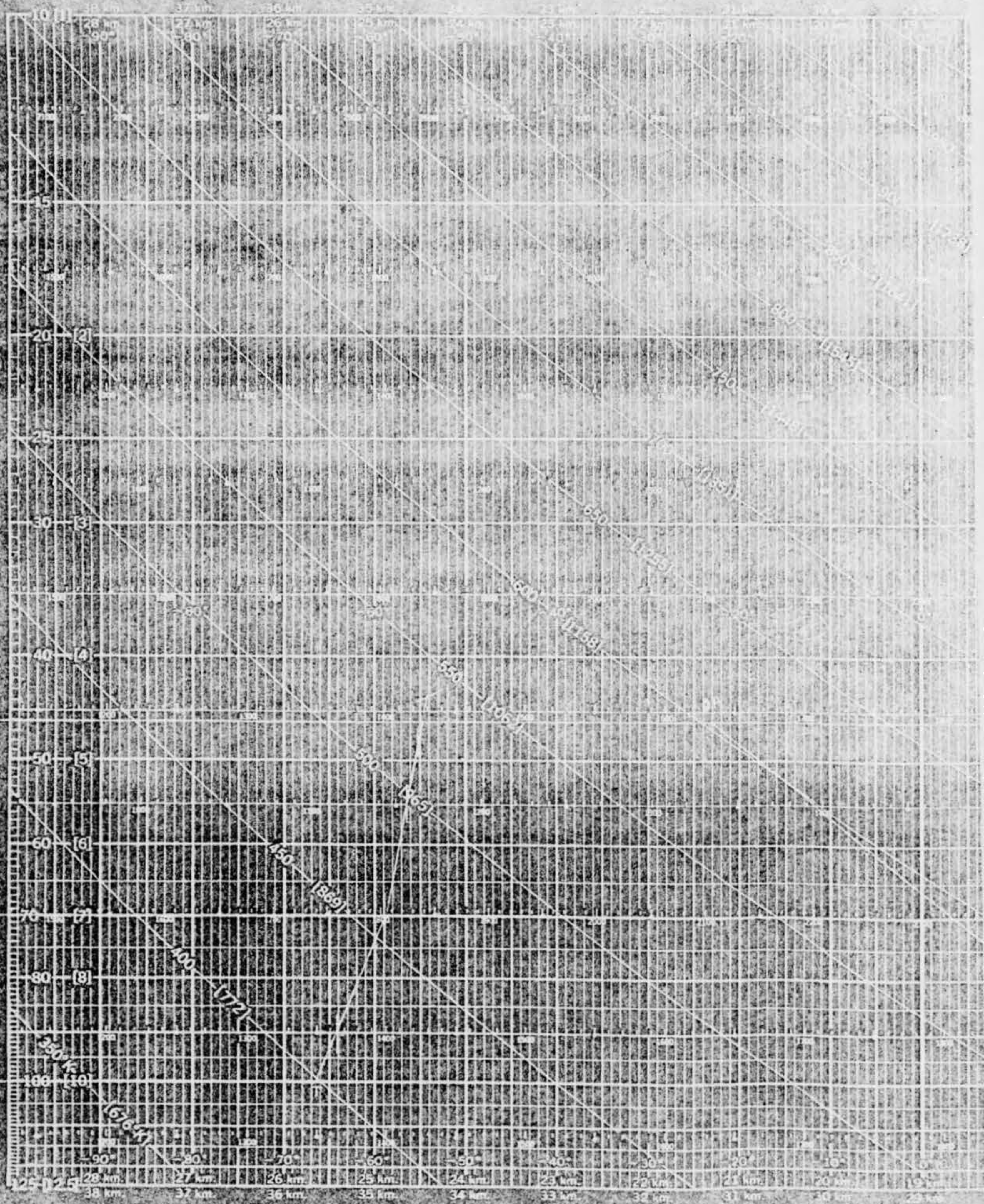
132.5 Percent Moisture $\diamond$ 670 Percent Moisture

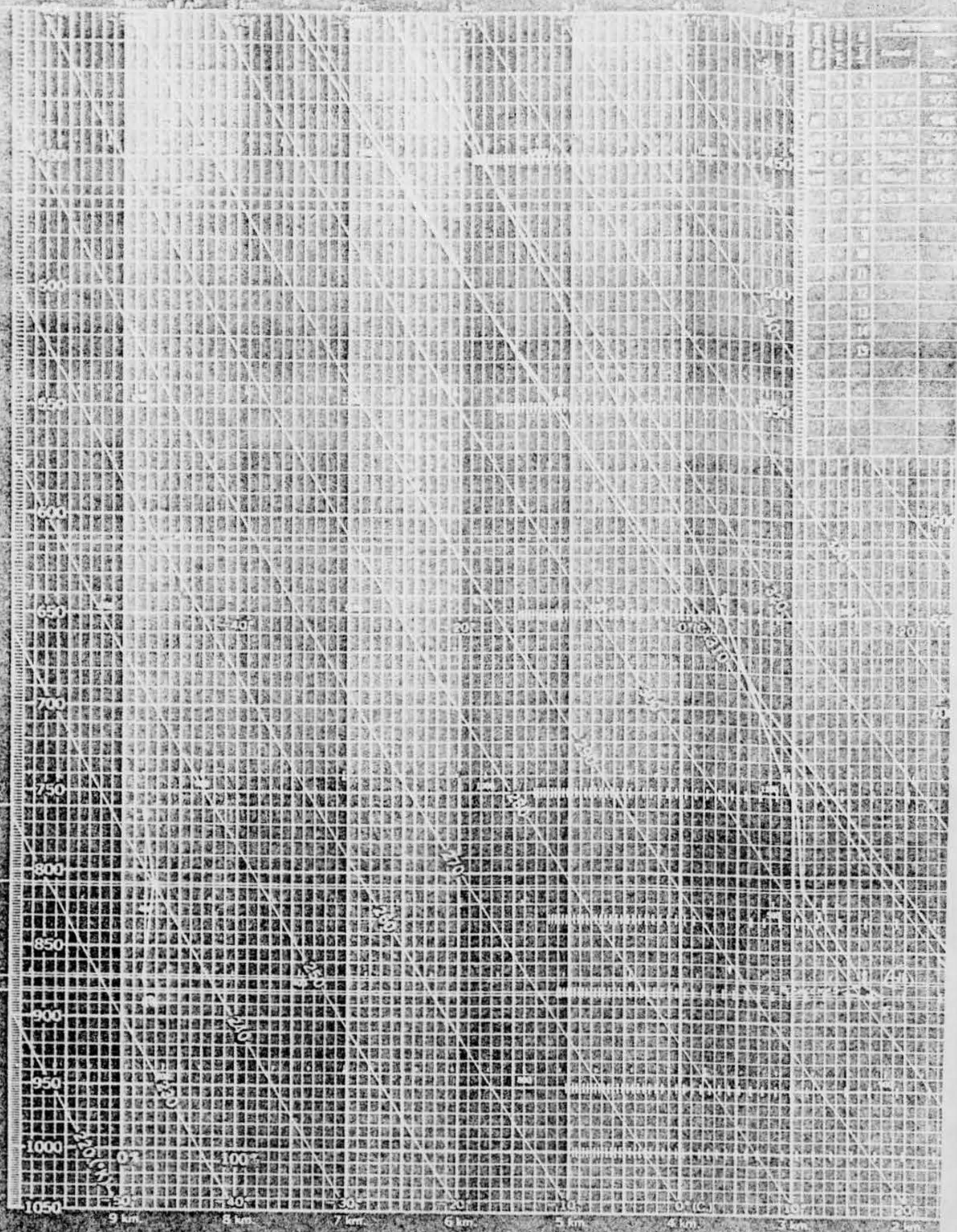
133.5 Percent Moisture $\star$ 675 Percent Moist

DATE AND RELEASE TIME				
DATE	TIME	DATE	TIME	DATE
1965	10:00	1967	10:00	2 00:00
1966	10:00	1968	10:00	2 00:00

Sgt. Eric S. Galt, 30, of
10-48-A, died Nov. 16.

**Prepared by the Corps and
Washington, D.C. 1957**





U.S. DEPARTMENT OF COMMERCE
WEATHER BUREAU
ADIABATIC CHART
CHART NO. 1

BASELINE CHART MEASUREMENTS

Time	Pressure	Temp	Humidity
250	29.9	71.0	20.0
260	29.8	70.0	19.0
270	29.7	69.0	18.0
280	29.6	68.0	17.0
290	29.5	67.0	16.0
300	29.4	66.0	15.0
310	29.3	65.0	14.0
320	29.2	64.0	13.0
330	29.1	63.0	12.0
340	29.0	62.0	11.0
350	28.9	61.0	10.0
360	28.8	60.0	9.0
370	28.7	59.0	8.0
380	28.6	58.0	7.0
390	28.5	57.0	6.0
400	28.4	56.0	5.0
410	28.3	55.0	4.0
420	28.2	54.0	3.0
430	28.1	53.0	2.0
440	28.0	52.0	1.0
450	27.9	51.0	0.0

CODED MESSAGE FOR TRANSMISSION

572	1060	5	71	20	00
1000	29.9	71.0	20.0	00	00
0100	29.8	70.0	19.0	00	00
0200	29.7	69.0	18.0	00	00
0300	29.6	68.0	17.0	00	00
0400	29.5	67.0	16.0	00	00
0500	29.4	66.0	15.0	00	00
0600	29.3	65.0	14.0	00	00
0700	29.2	64.0	13.0	00	00
0800	29.1	63.0	12.0	00	00
0900	29.0	62.0	11.0	00	00
1000	28.9	61.0	10.0	00	00
1100	28.8	60.0	9.0	00	00
1200	28.7	59.0	8.0	00	00
1300	28.6	58.0	7.0	00	00
1400	28.5	57.0	6.0	00	00
1500	28.4	56.0	5.0	00	00
1600	28.3	55.0	4.0	00	00
1700	28.2	54.0	3.0	00	00
1800	28.1	53.0	2.0	00	00
1900	28.0	52.0	1.0	00	00
2000	27.9	51.0	0.0	00	00

REMARKS

LEGEND FOR CONSTANT PRESSURE BLOCKS

DATA AS TRANSMITTED	DATA AS OBTAINED BY ADJUSTMENT
0000	0000
0100	0100
0200	0200
0300	0300
0400	0400
0500	0500
0600	0600
0700	0700
0800	0800
0900	0900
1000	1000
1100	1100
1200	1200
1300	1300
1400	1400
1500	1500
1600	1600
1700	1700
1800	1800
1900	1900
2000	2000

LEGEND FOR PLOTTED CURVES

10	10
20	20
30	30
40	40
50	50
60	60
70	70
80	80
90	90
100	100
110	110
120	120
130	130
140	140
150	150
160	160
170	170
180	180
190	190
200	200

DATE AND RELEASE TIME

1000	1961	01	1605
0000	1961	01	1605
0100	1961	01	1605
0200	1961	01	1605
0300	1961	01	1605
0400	1961	01	1605
0500	1961	01	1605
0600	1961	01	1605
0700	1961	01	1605
0800	1961	01	1605
0900	1961	01	1605
1000	1961	01	1605
1100	1961	01	1605
1200	1961	01	1605
1300	1961	01	1605
1400	1961	01	1605
1500	1961	01	1605
1600	1961	01	1605
1700	1961	01	1605
1800	1961	01	1605
1900	1961	01	1605
2000	1961	01	1605

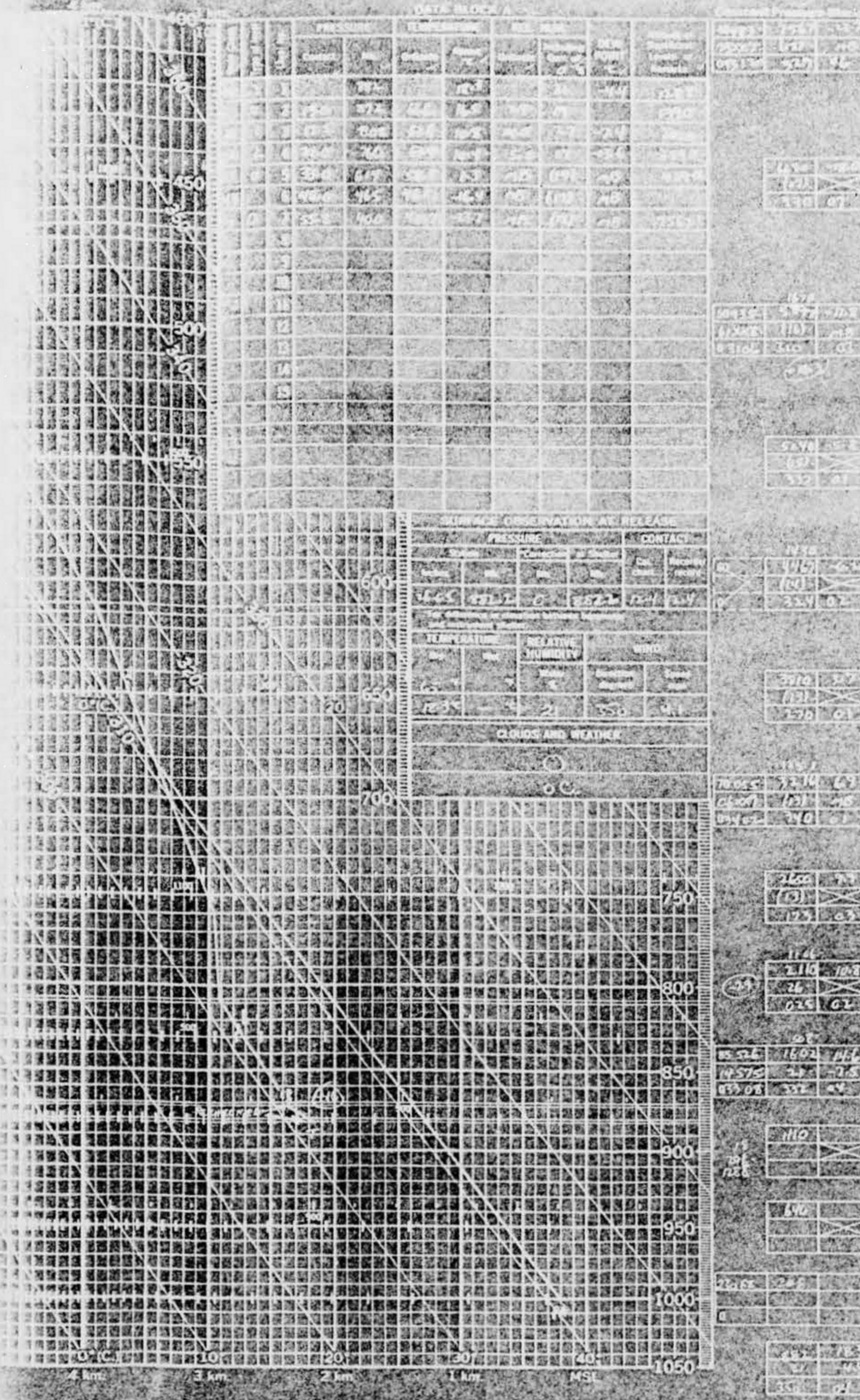
STATION

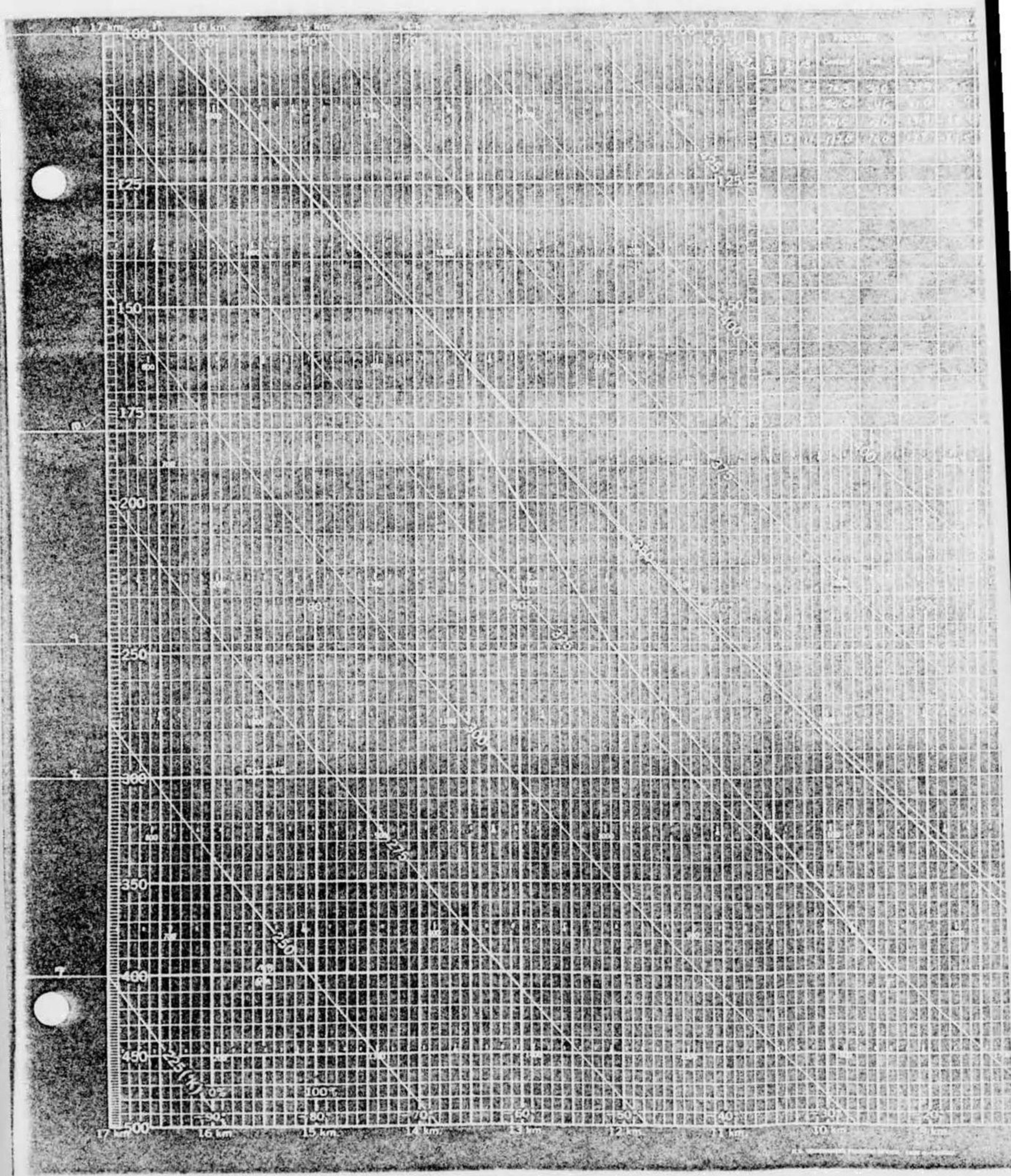
1000	1961	01	1605
0000	1961	01	1605
0100	1961	01	1605
0200	1961	01	1605
0300	1961	01	1605
0400	1961	01	1605
0500	1961	01	1605
0600	1961	01	1605
0700	1961	01	1605
0800	1961	01	1605
0900	1961	01	1605
1000	1961	01	1605
1100	1961	01	1605
1200	1961	01	1605
1300	1961	01	1605
1400	1961	01	1605
1500	1961	01	1605
1600	1961	01	1605
1700	1961	01	1605
1800	1961	01	1605
1900	1961	01	1605
2000	1961	01	1605

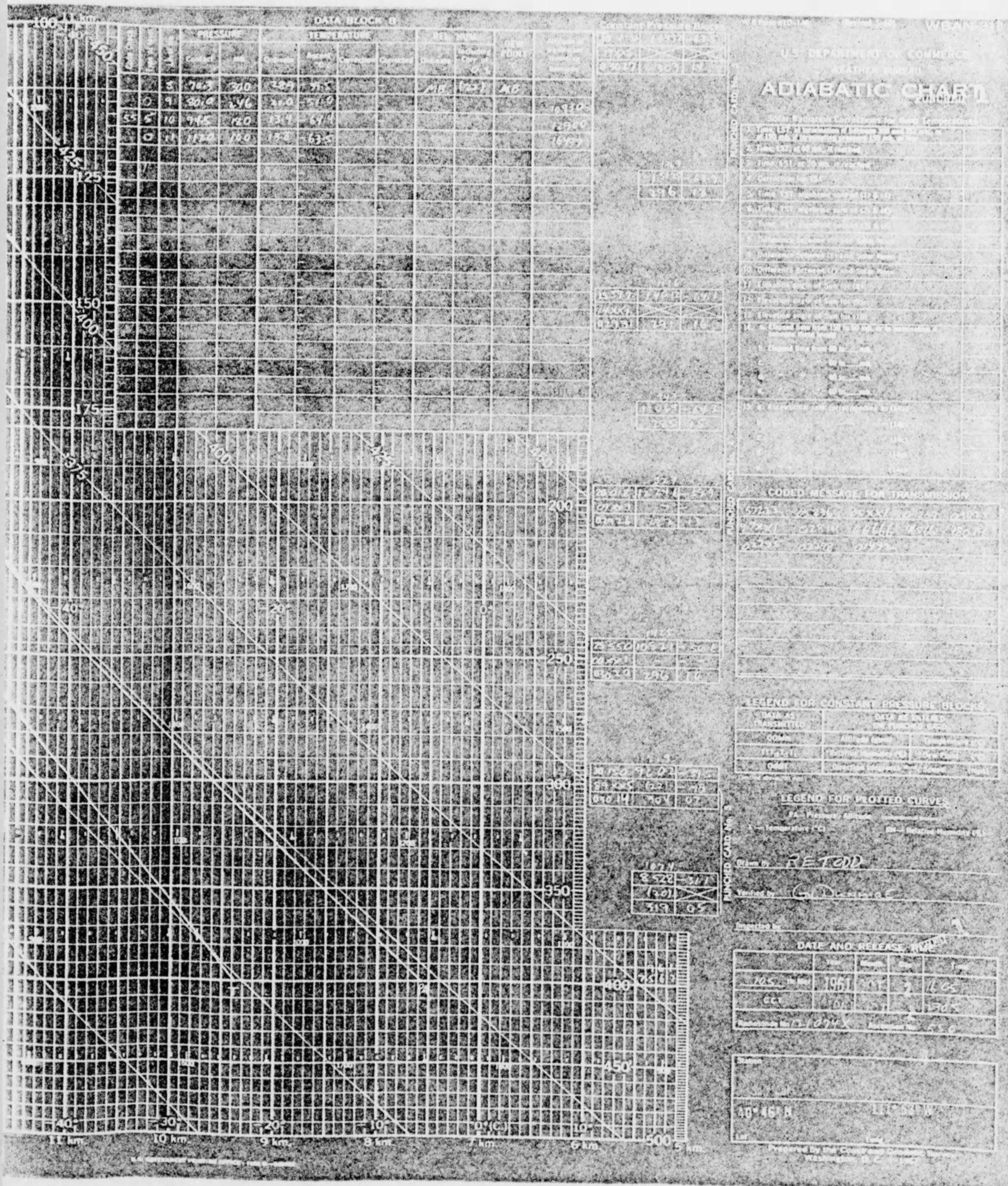
STATION

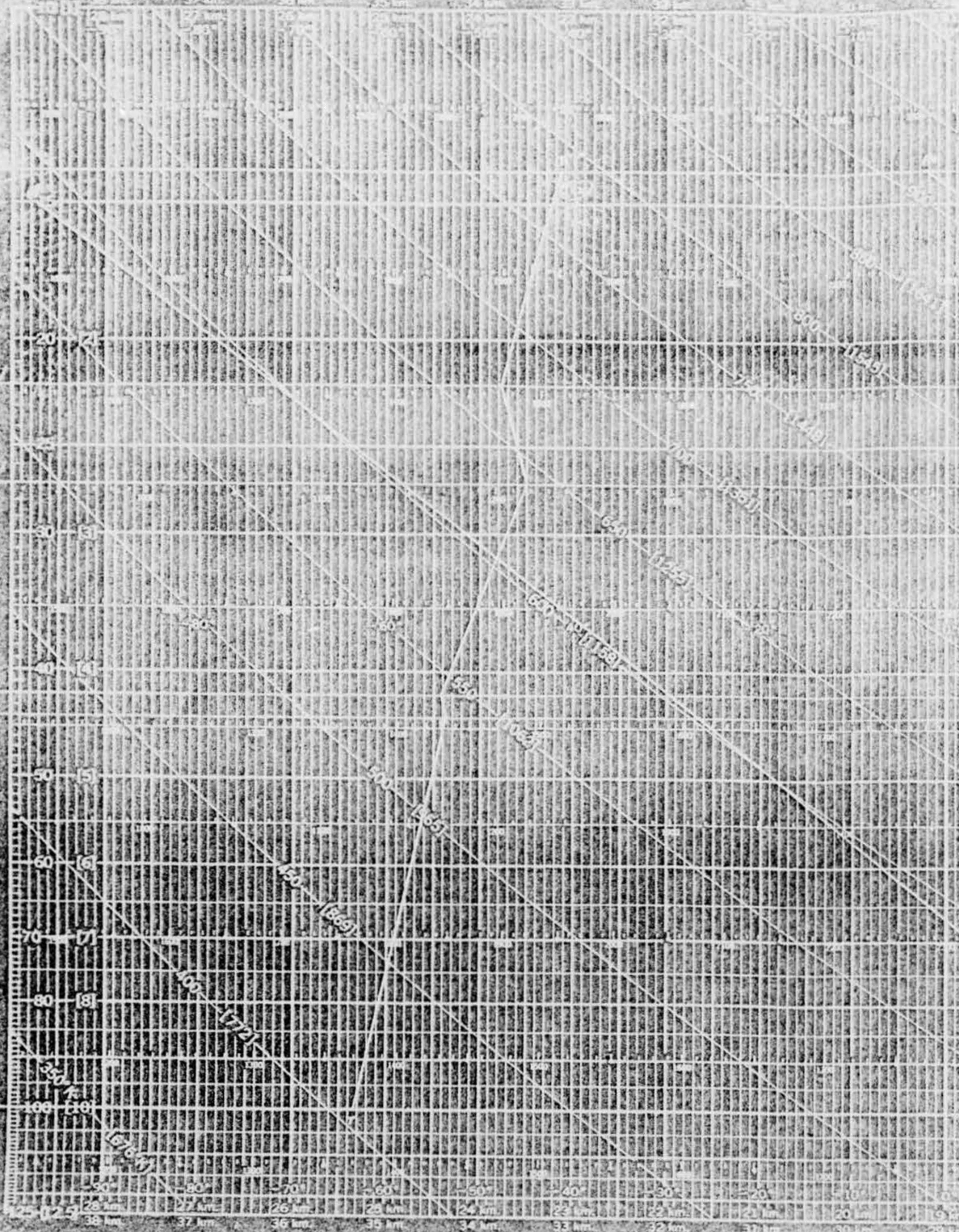
1000	1961	01	1605
0000	1961	01	1605
0100	1961	01	1605
0200	1961	01	1605
0300	1961	01	1605
0400	1961	01	1605
0500	1961	01	1605
0600	1961	01	1605
0700	1961	01	1605
0800	1961	01	1605
0900	1961	01	1605
1000	1961	01	1605
1100	1961	01	1605
1200	1961	01	1605
1300	1961	01	1605
1400	1961	01	1605
1500	1961	01	1605
1600	1961	01	1605
1700	1961	01	1605
1800	1961	01	1605
1900	1961	01	1605
2000	1961	01	1605

Prepared by the Coast and Geodetic Survey
Washington, D.C. 20540









1998

DAIRY GAIN.

A 10x10 grid of 100 small grayscale images. Each image is a square patch showing a different texture or pattern, such as wood grain, stone, or abstract noise. The patches are arranged in a regular grid, with some showing more distinct patterns than others.

1996/97

LEGEND FOR CONTINUED FROM PAGE 100

LEGEND FOR PLOTTED CURVES

10. The following table shows the number of people who attended the concert in each age group.

Drawn by RETAD

62-111766-1

Introduction

DATE AND RELEASE TIME

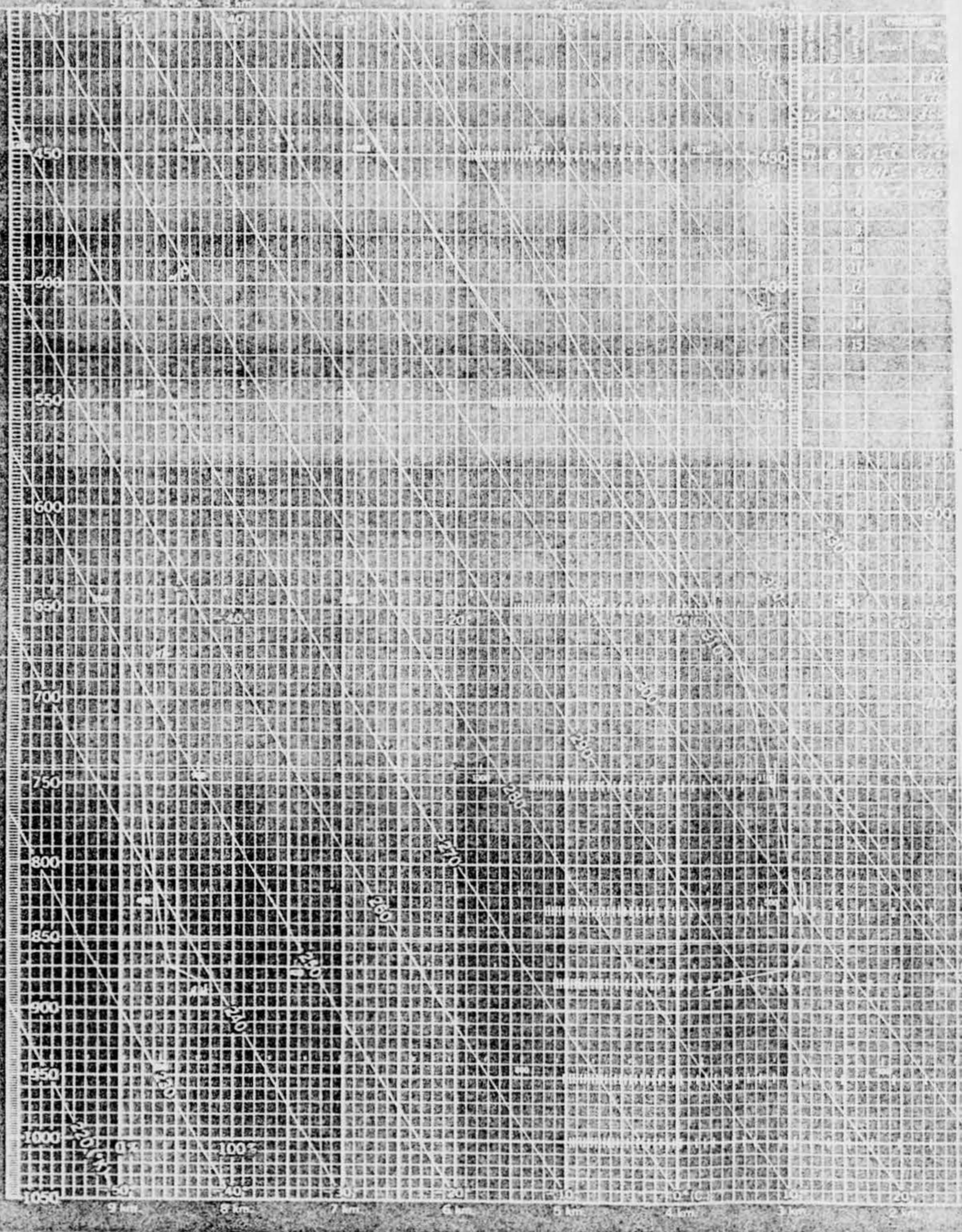
105	195	2	105
106	196	2	106
107		107	
108		108	

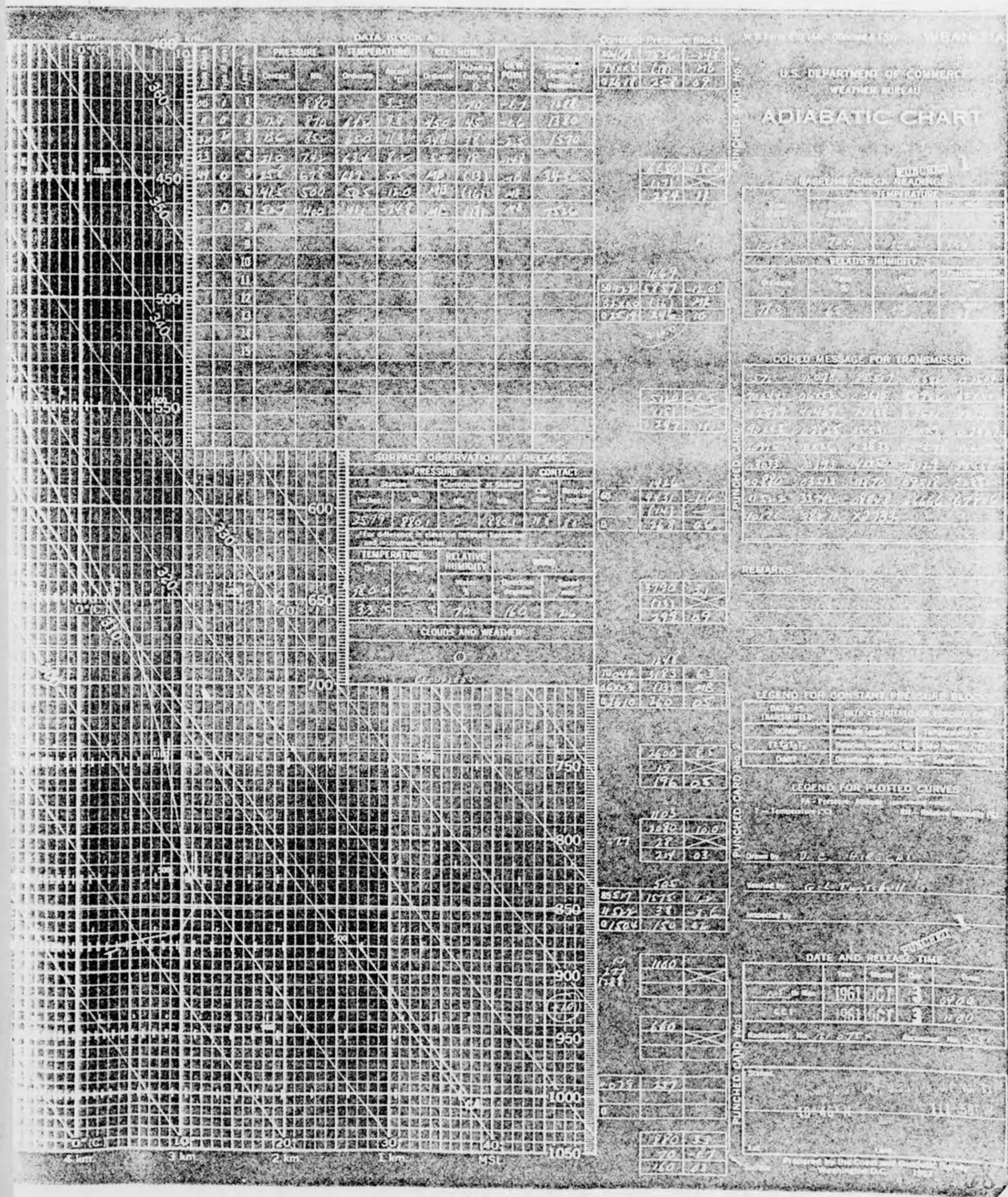
1997

Salt Lake City, Utah

40-48 N 12-50 W

1. The first step is to identify the problem or question that needs to be answered. This involves understanding the context and the specific requirements of the task.





U.S. DEPARTMENT OF COMMERCE
WEATHER BUREAU
ADIABATIC CHART

BASELINE CHECK READINGS

Pressure	Temperature	Relative Humidity
1013.25	15.0	50

RELATIVE HUMIDITY

Pressure	Temperature	Relative Humidity
1013.25	15.0	50

CODED MESSAGE FOR TRANSMISSION

1013.25 15.0 50

1013.25 15.0 50

1013.25 15.0 50

1013.25 15.0 50

1013.25 15.0 50

1013.25 15.0 50

1013.25 15.0 50

1013.25 15.0 50

1013.25 15.0 50

1013.25 15.0 50

REMARKS

LEGEND FOR CONSTANT PRESSURE

Pressure	Temperature	Relative Humidity
1013.25	15.0	50

LEGEND FOR PLOTTED CURVES

1013.25 15.0 50

DATE AND RELEASE TIME

1961 01 01 03 00

DATE AND RELEASE TIME

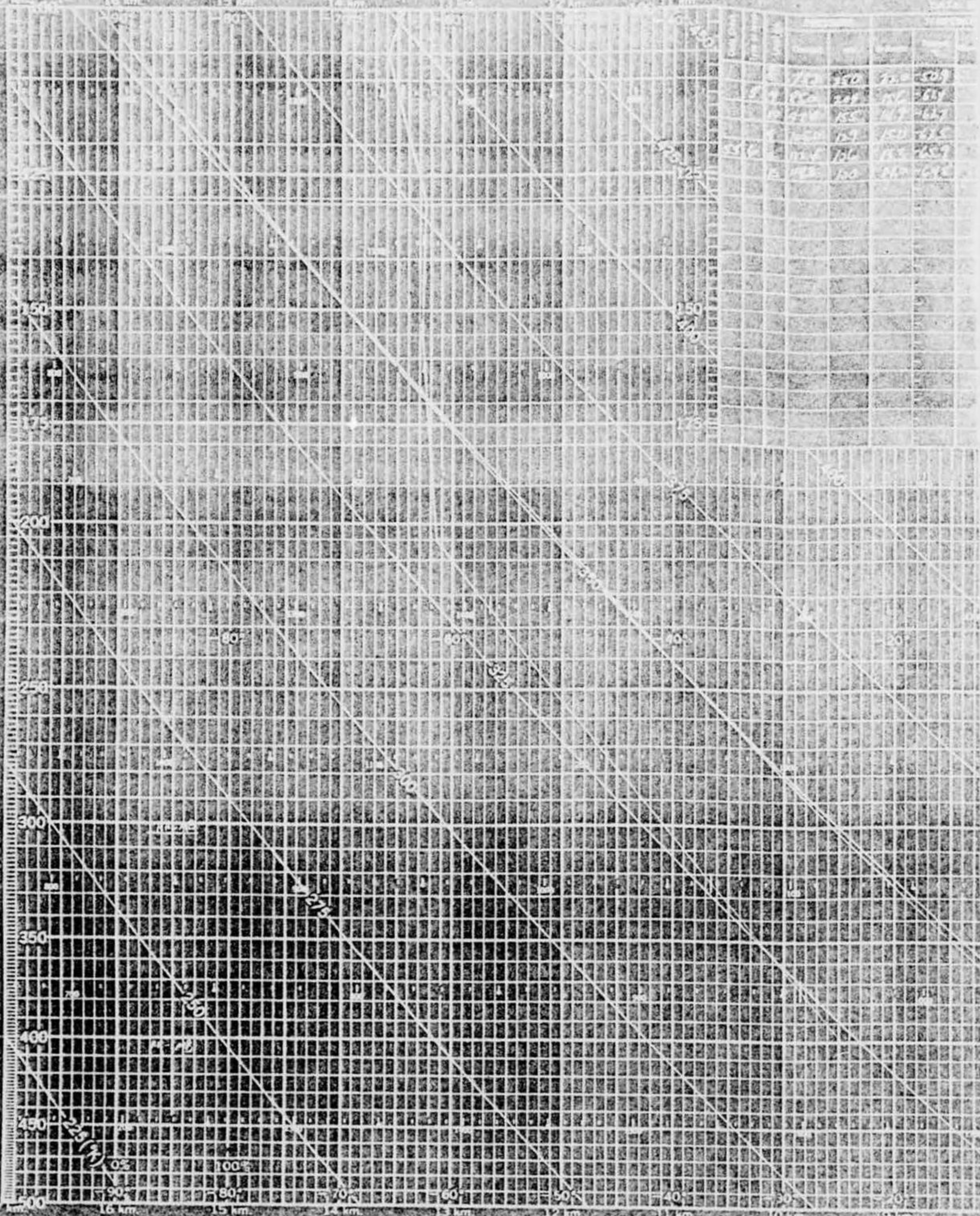
1961 01 01 03 00

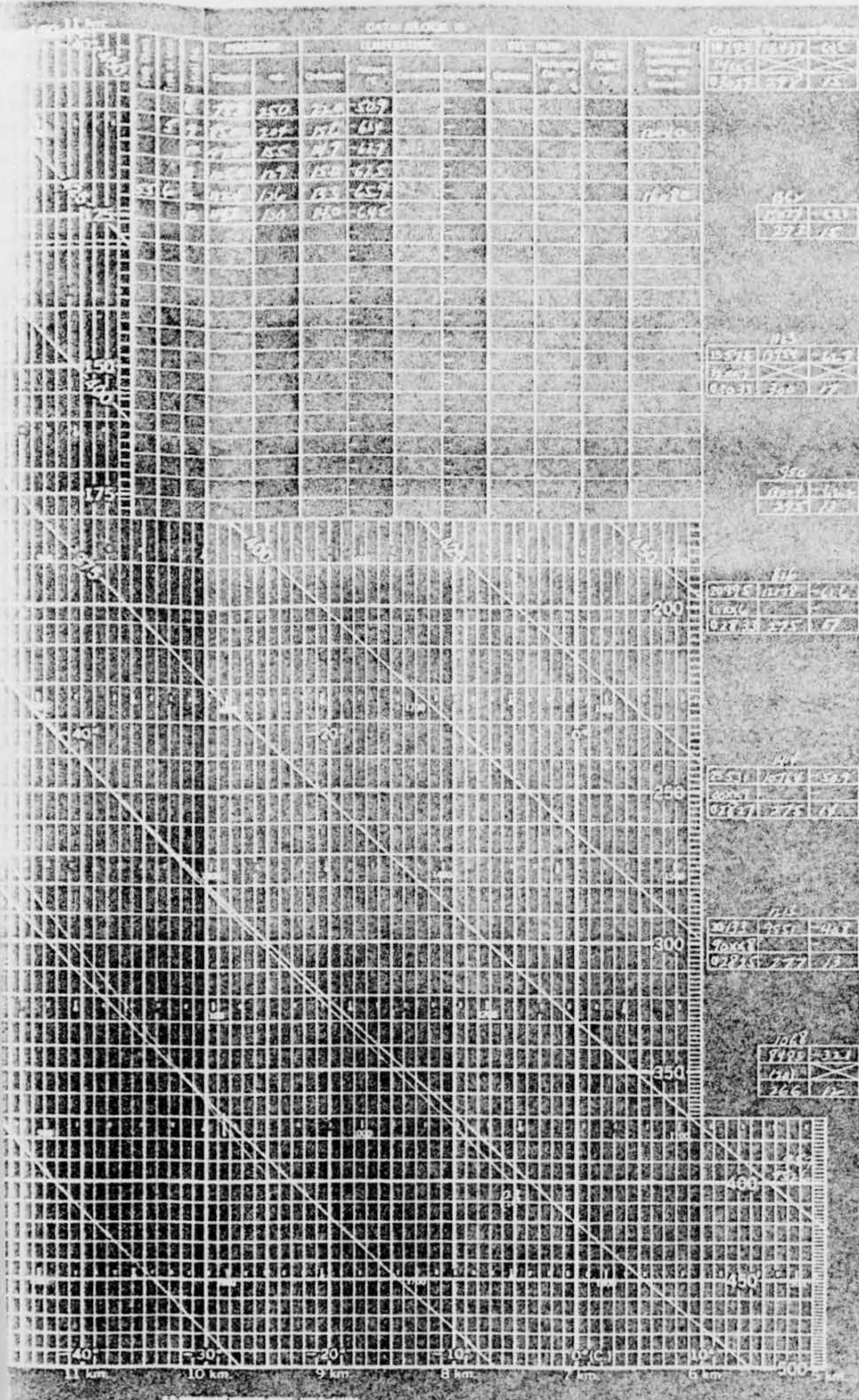
DATE AND RELEASE TIME

1961 01 01 03 00

DATE AND RELEASE TIME

1961 01 01 03 00





U.S. DEPARTMENT OF COMMERCE
WEATHER BUREAU
ADIABATIC CHART

1

STATION: _____
DATE: _____
TIME: _____

COORDINATES: _____
ELEVATION: _____

WIND: _____
TEMP: _____
PRESS: _____
HUMID: _____
WIND DIR: _____
WIND SPC: _____
WIND VEC: _____
WIND MAG: _____
WIND DIR: _____
WIND SPC: _____
WIND VEC: _____
WIND MAG: _____

CODED MESSAGE FOR TRANSMISSION

0001 0000 0000 0000 0000
0000 0000 0000 0000 0000
0000 0000 0000 0000 0000

LEGEND FOR CONSTANT MOISTURE CLOUDS

DATA AS TRANSMITTED	DATA AS ENTERED ON ADIABATIC CHART
0000	0000
0001	0001
0002	0002
0003	0003
0004	0004
0005	0005
0006	0006
0007	0007
0008	0008
0009	0009
0010	0010
0011	0011
0012	0012
0013	0013
0014	0014
0015	0015
0016	0016
0017	0017
0018	0018
0019	0019
0020	0020
0021	0021
0022	0022
0023	0023
0024	0024
0025	0025
0026	0026
0027	0027
0028	0028
0029	0029
0030	0030
0031	0031
0032	0032
0033	0033
0034	0034
0035	0035
0036	0036
0037	0037
0038	0038
0039	0039
0040	0040
0041	0041
0042	0042
0043	0043
0044	0044
0045	0045
0046	0046
0047	0047
0048	0048
0049	0049
0050	0050
0051	0051
0052	0052
0053	0053
0054	0054
0055	0055
0056	0056
0057	0057
0058	0058
0059	0059
0060	0060
0061	0061
0062	0062
0063	0063
0064	0064
0065	0065
0066	0066
0067	0067
0068	0068
0069	0069
0070	0070
0071	0071
0072	0072
0073	0073
0074	0074
0075	0075
0076	0076
0077	0077
0078	0078
0079	0079
0080	0080
0081	0081
0082	0082
0083	0083
0084	0084
0085	0085
0086	0086
0087	0087
0088	0088
0089	0089
0090	0090
0091	0091
0092	0092
0093	0093
0094	0094
0095	0095
0096	0096
0097	0097
0098	0098
0099	0099

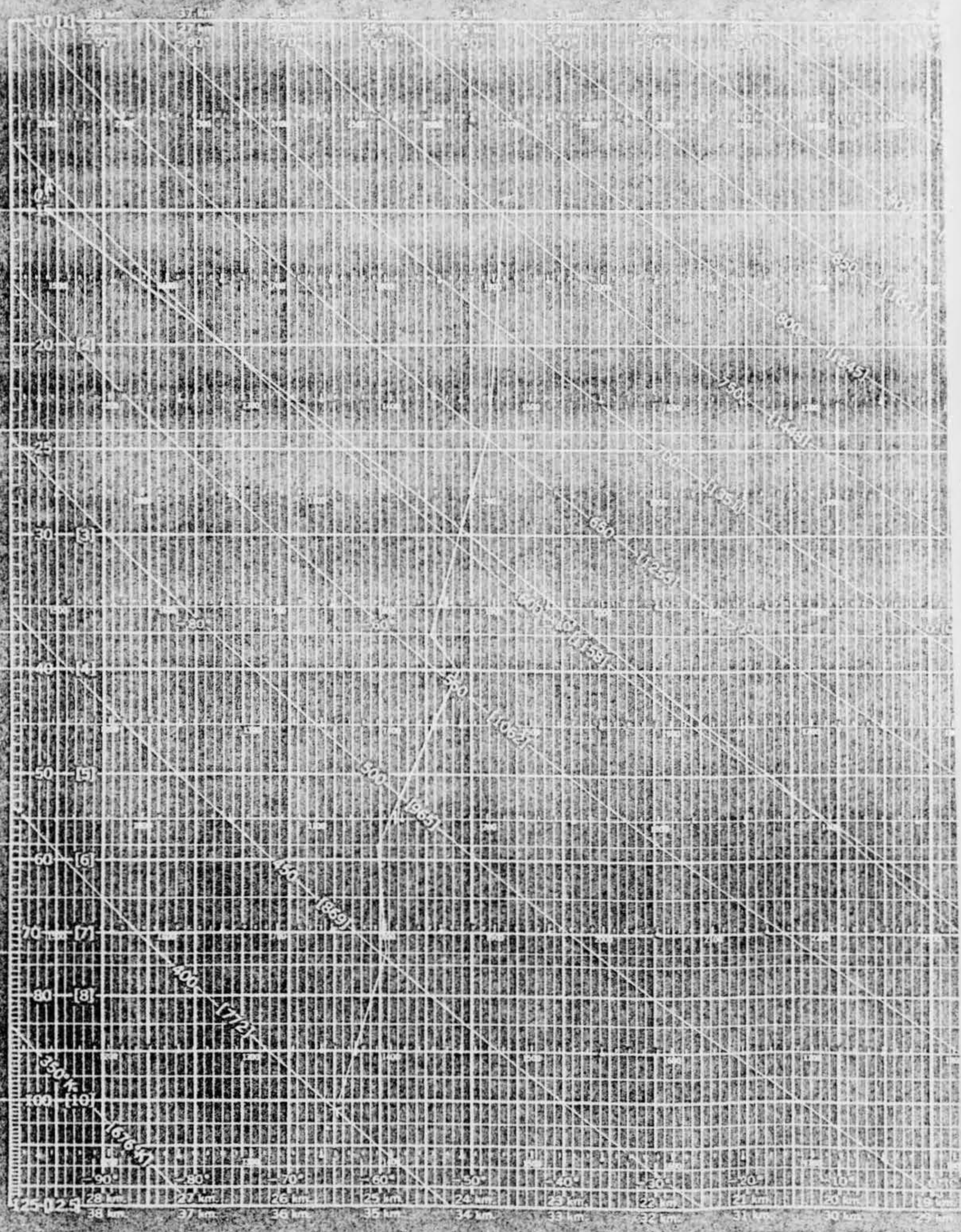
LEGEND FOR DOTTED CURVES

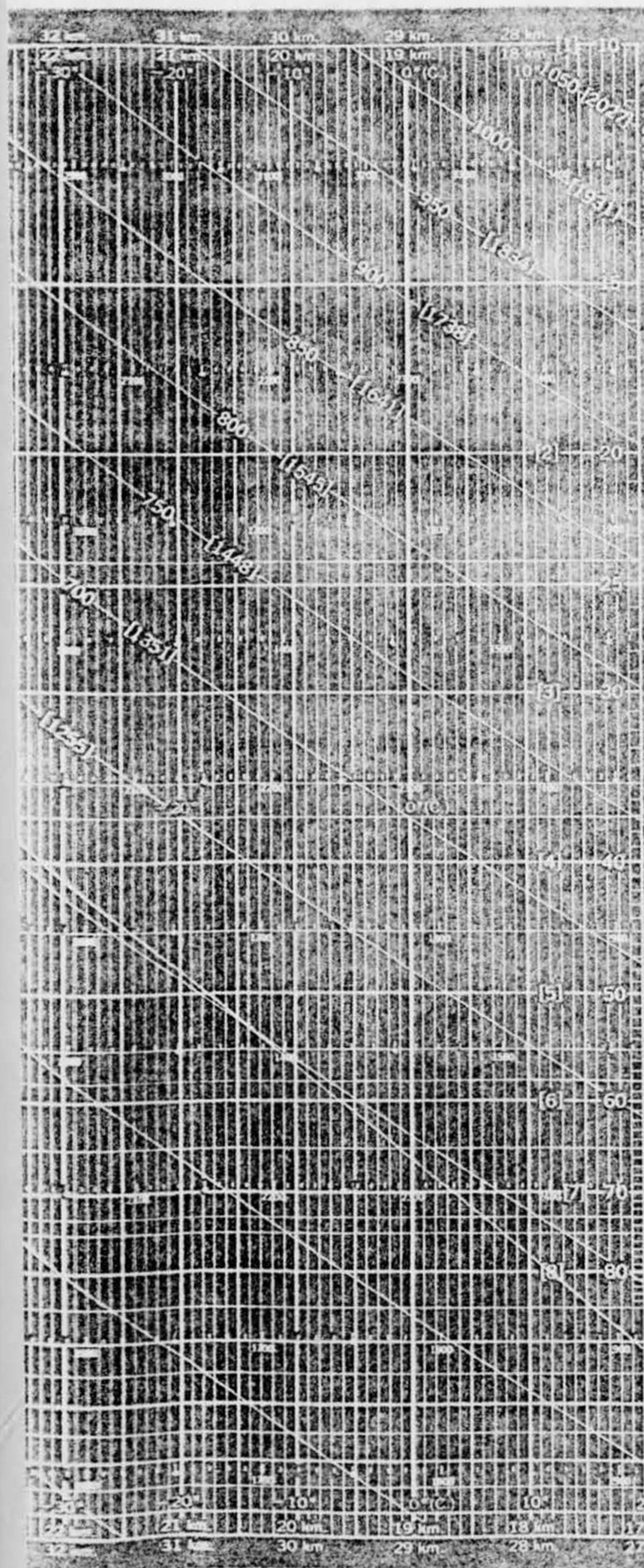
1 - 1000 ft
2 - 2000 ft
3 - 3000 ft
4 - 4000 ft
5 - 5000 ft
6 - 6000 ft
7 - 7000 ft
8 - 8000 ft
9 - 9000 ft
10 - 10000 ft

DATE AND RELEASE TIME

DATE	TIME	REMARKS
1961	1000	1000
1961	1000	1000

10-45 N 151-58 W





U.S. DEPARTMENT OF COMMERCE
WEATHER BUREAU

ADIABATIC CHART

FIGURE 1

DATA GROSS

Pressure	Temperature	Humidity	Wet Bulb	Dew Point	Clouds	Remarks
1000	15	75	12	10		
950	12	70	11	9		
900	10	65	10	8		
850	8	60	9	7		
800	6	55	8	6		
750	4	50	7	5		
700	2	45	6	4		
650	0	40	5	3		
600	-2	35	4	2		
550	-4	30	3	1		
500	-6	25	2	0		
450	-8	20	1	-1		
400	-10	15	0	-2		
350	-12	10	-1	-3		
300	-14	5	-2	-4		
250	-16	0	-3	-5		
200	-18	-5	-4	-6		
150	-20	-10	-5	-7		
100	-22	-15	-6	-8		

REMARKS

LEGEND FOR CONSTANT PRESSURE BLOCKS

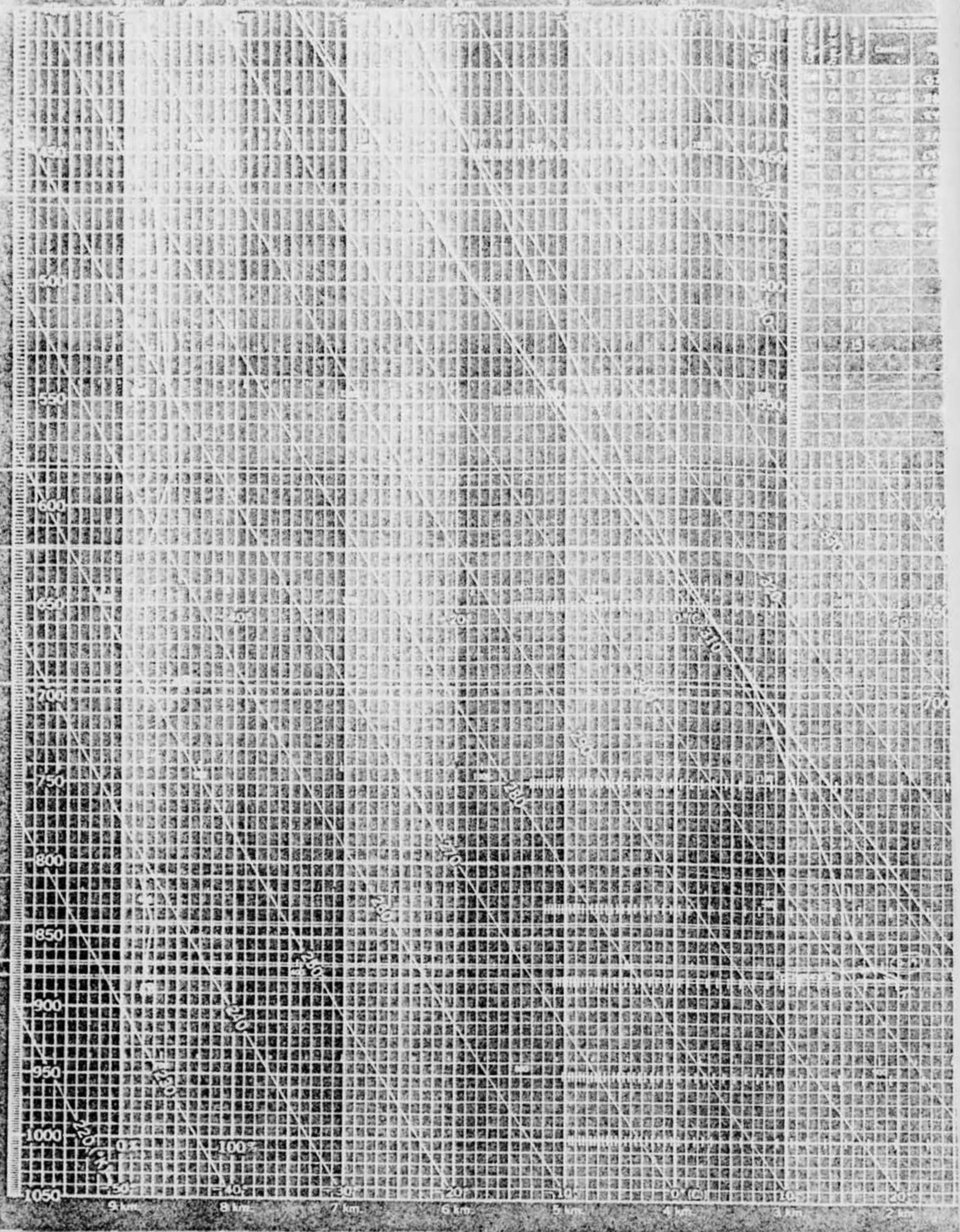
DATA AS TRANSMITTED	DATA AS ENTERED ON PLOTTED CURVE
TEMP	TEMP (°C)
WET BULB	WET BULB (°C)
DWPT	DWPT (°C)
REL H	REL H (%)

LEGEND FOR PLOTTED CURVES

PA - Pressure, Actual, Standard, or Sea Level
T - Temperature, °C

DATE AND RELEASE TIME

DATE	TIME	REMARKS
1961 OCT 3	10 45	
1961 OCT 3	11 00	



HEADQUARTERS
2849TH AIR BASE WING
UNITED STATES AIR FORCE
Hill Air Force Base, Utah

REPLY TO
ATTN OF

OOBB

6 October 1961

SUBJECT

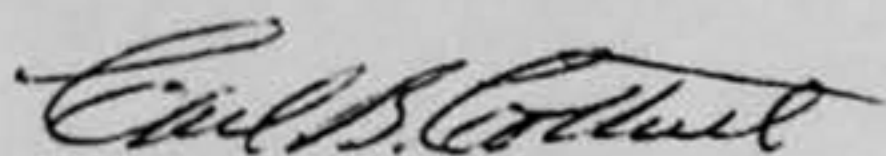
Unidentified Flying Object

TO

AFLC (TD-E)
Wright-Patterson AFB, Ohio

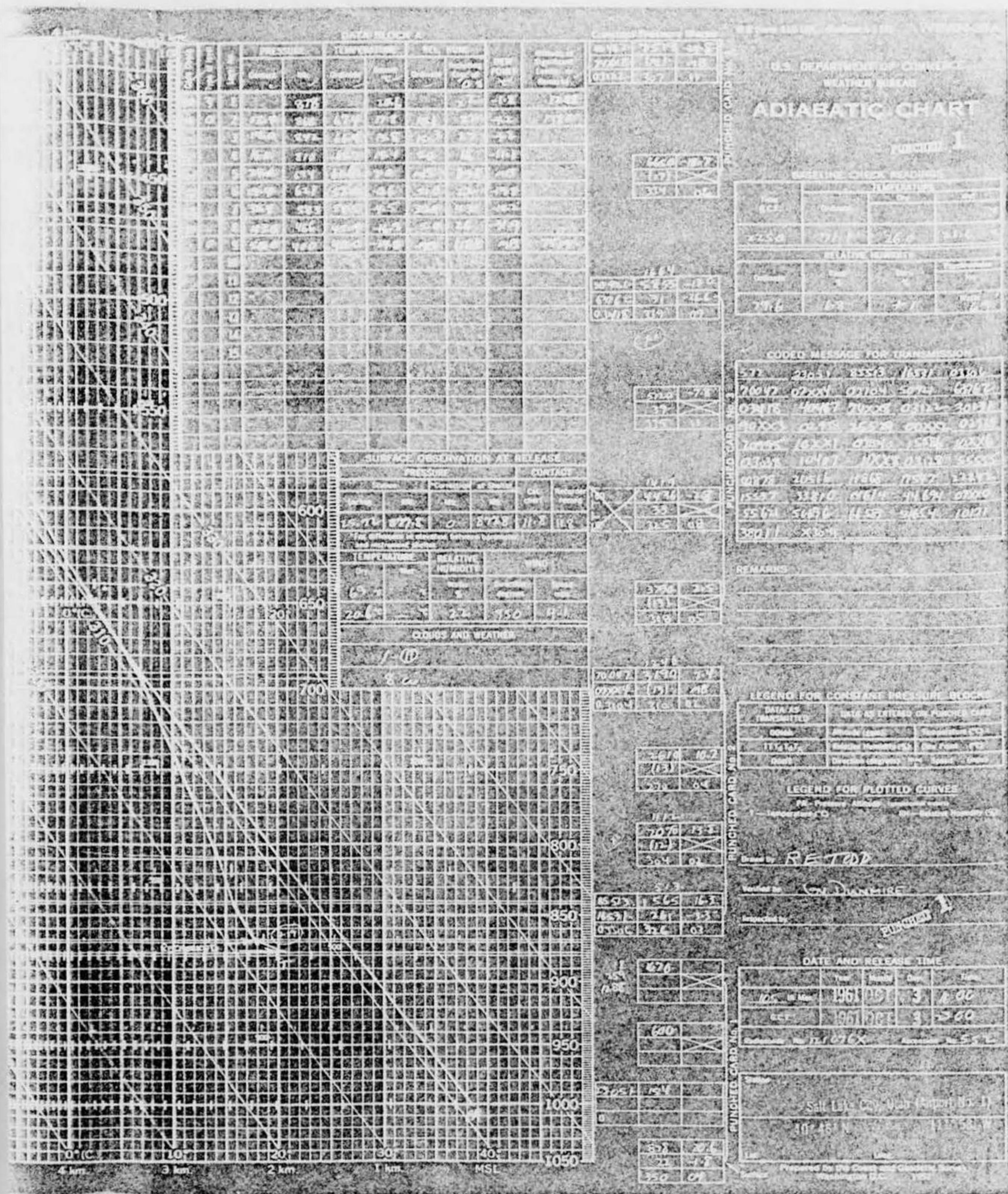
1. Reference is made to message TD-E 5-10-85 dated 5 October 1961.
2. AF Form 112, together with taped recordings of interview of six observers of UFO at Utah Central Airport, will be forwarded on or about 9 October 1961. Also reports of initial investigation concerning three other sightings in the Utah area.

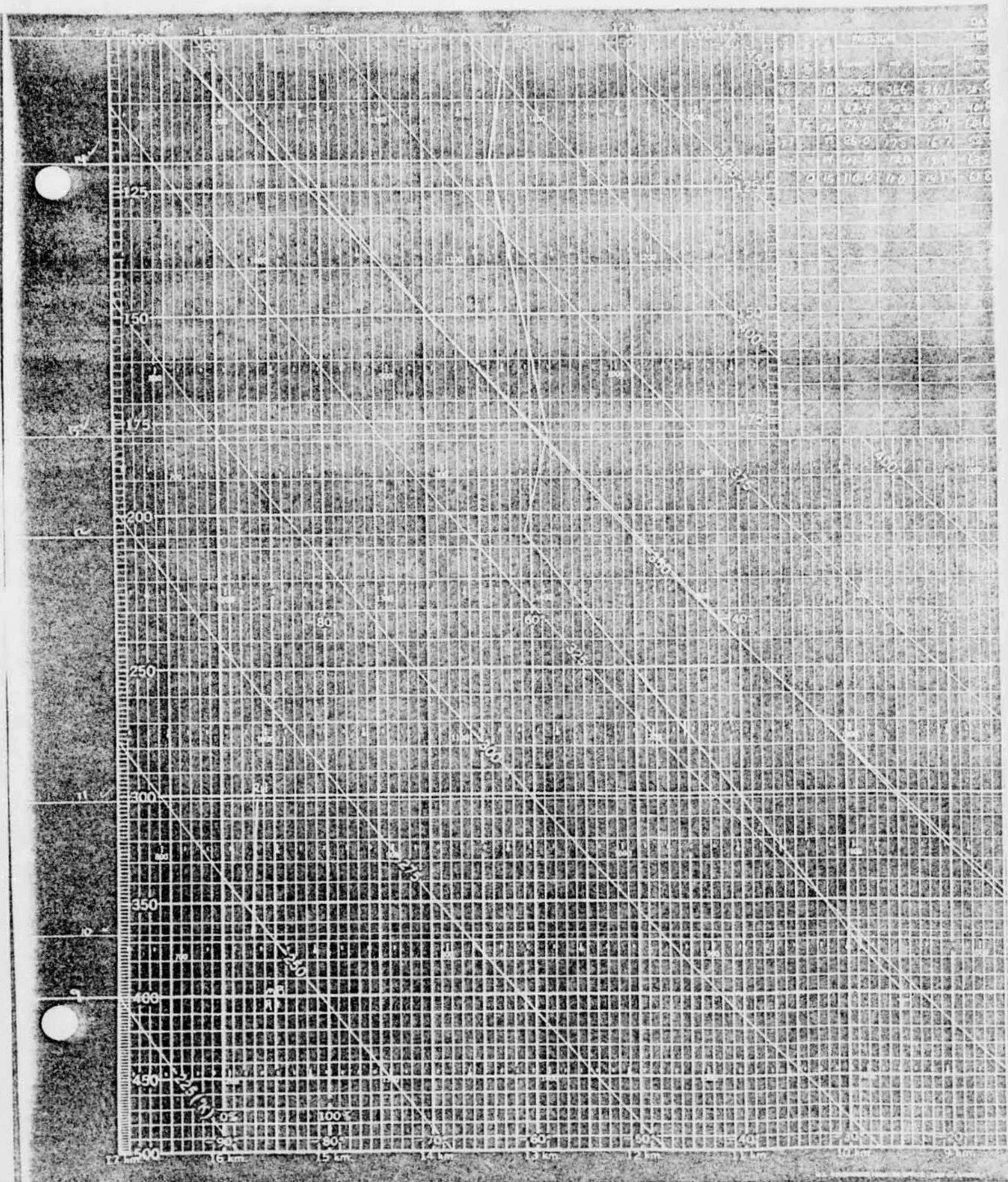
FOR THE COMMANDER



CARL B. COTTRELL
Chief, Internal Security Branch
Security & Law Enforcement Division

FILED
OCT 12 34
RECEIVED





DATA BLOCK 1

CONSTANT PRESSURE BLOCK

U.S. DEPARTMENT OF COMMERCE

WEATHER BUREAU

WEAN 318

ADIABATIC CHART

FORM 1011-1

U.S. DEPARTMENT OF COMMERCE

WEATHER BUREAU

FORM 1011-1

U.S. DEPARTMENT OF COMMERCE

WEATHER BUREAU

FORM 1011-1

U.S. DEPARTMENT OF COMMERCE

WEATHER BUREAU

FORM 1011-1

U.S. DEPARTMENT OF COMMERCE

WEATHER BUREAU

FORM 1011-1

U.S. DEPARTMENT OF COMMERCE

WEATHER BUREAU

FORM 1011-1

U.S. DEPARTMENT OF COMMERCE

WEATHER BUREAU

FORM 1011-1

U.S. DEPARTMENT OF COMMERCE

WEATHER BUREAU

FORM 1011-1

U.S. DEPARTMENT OF COMMERCE

WEATHER BUREAU

FORM 1011-1

U.S. DEPARTMENT OF COMMERCE

WEATHER BUREAU

FORM 1011-1

U.S. DEPARTMENT OF COMMERCE

WEATHER BUREAU

FORM 1011-1

U.S. DEPARTMENT OF COMMERCE

WEATHER BUREAU

FORM 1011-1

U.S. DEPARTMENT OF COMMERCE

WEATHER BUREAU

FORM 1011-1

U.S. DEPARTMENT OF COMMERCE

WEATHER BUREAU

FORM 1011-1

U.S. DEPARTMENT OF COMMERCE

WEATHER BUREAU

FORM 1011-1

U.S. DEPARTMENT OF COMMERCE

WEATHER BUREAU

FORM 1011-1

U.S. DEPARTMENT OF COMMERCE

WEATHER BUREAU

FORM 1011-1

U.S. DEPARTMENT OF COMMERCE

WEATHER BUREAU

FORM 1011-1

U.S. DEPARTMENT OF COMMERCE

WEATHER BUREAU

FORM 1011-1

U.S. DEPARTMENT OF COMMERCE

WEATHER BUREAU

FORM 1011-1

U.S. DEPARTMENT OF COMMERCE

WEATHER BUREAU

FORM 1011-1

U.S. DEPARTMENT OF COMMERCE

WEATHER BUREAU

FORM 1011-1

U.S. DEPARTMENT OF COMMERCE

WEATHER BUREAU

FORM 1011-1

U.S. DEPARTMENT OF COMMERCE

WEATHER BUREAU

FORM 1011-1

U.S. DEPARTMENT OF COMMERCE

WEATHER BUREAU

FORM 1011-1

U.S. DEPARTMENT OF COMMERCE

WEATHER BUREAU

FORM 1011-1

U.S. DEPARTMENT OF COMMERCE

WEATHER BUREAU

FORM 1011-1

U.S. DEPARTMENT OF COMMERCE

WEATHER BUREAU

FORM 1011-1

U.S. DEPARTMENT OF COMMERCE

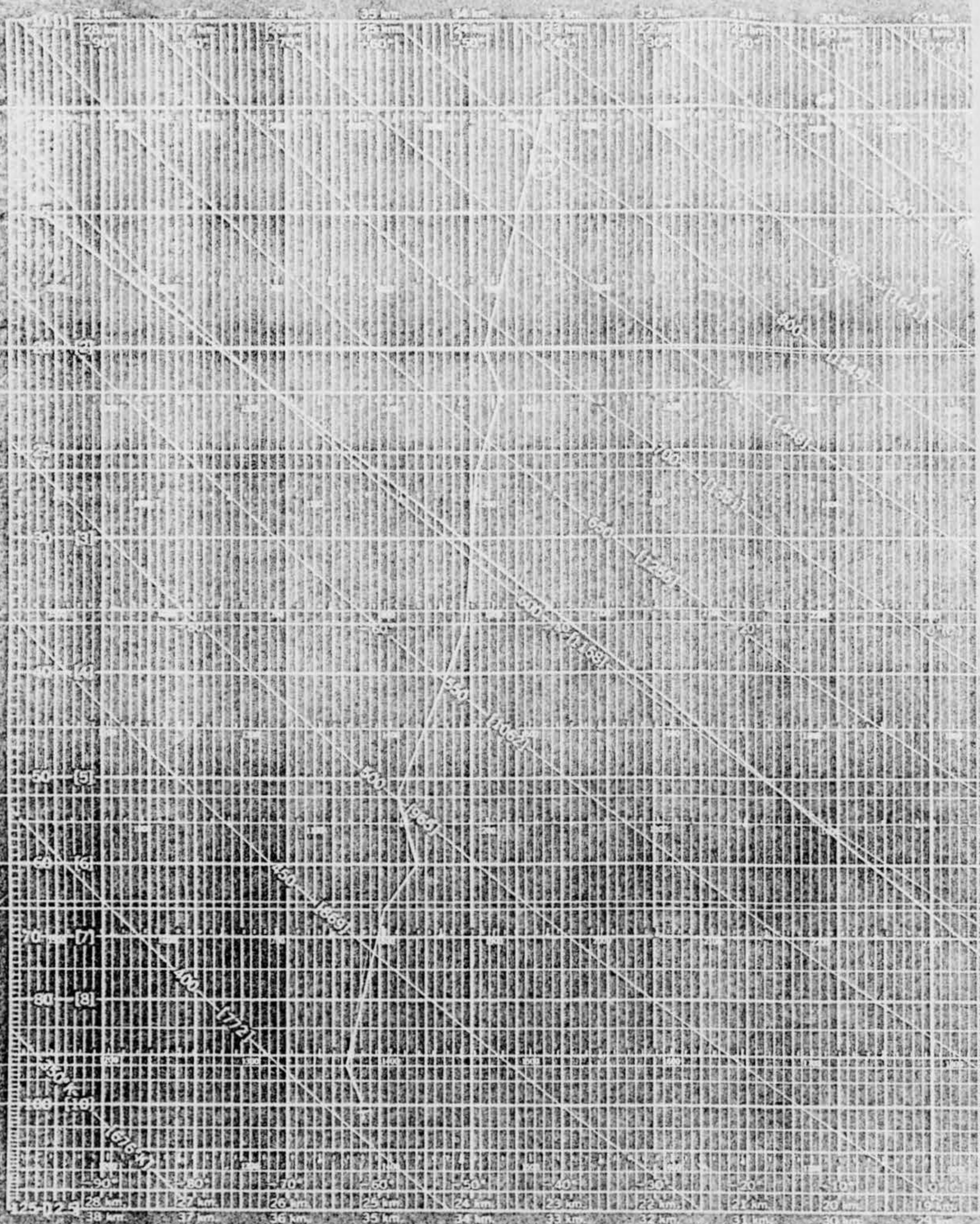
WEATHER BUREAU

FORM 1011-1

U.S. DEPARTMENT OF COMMERCE

WEATHER BUREAU

FORM 1011-1



U.S. DEPARTMENT OF COMMERCE
WEATHER BUREAU
ADIABATIC CHART

FIGURE 1

Pressure (mb)	Temperature (°C)	Relative Humidity (%)	Dew Point (°C)	Wet-Bulb (°C)	Wet-Bulb Globe (°C)	Wet-Bulb Globe (°F)
1000	15	100	15	15	15	59
1000	10	100	10	10	10	50
1000	5	100	5	5	5	41
1000	0	100	0	0	0	32
1000	-5	100	-5	-5	-5	23
1000	-10	100	-10	-10	-10	14
1000	-15	100	-15	-15	-15	5
1000	-20	100	-20	-20	-20	-4
1000	-25	100	-25	-25	-25	-13
1000	-30	100	-30	-30	-30	-22
1000	-35	100	-35	-35	-35	-31
1000	-40	100	-40	-40	-40	-40
1000	-45	100	-45	-45	-45	-49
1000	-50	100	-50	-50	-50	-58
1000	-55	100	-55	-55	-55	-67
1000	-60	100	-60	-60	-60	-76
1000	-65	100	-65	-65	-65	-85
1000	-70	100	-70	-70	-70	-94
1000	-75	100	-75	-75	-75	-103
1000	-80	100	-80	-80	-80	-112
1000	-85	100	-85	-85	-85	-121
1000	-90	100	-90	-90	-90	-130
1000	-95	100	-95	-95	-95	-139
1000	-100	100	-100	-100	-100	-148
1000	-105	100	-105	-105	-105	-157
1000	-110	100	-110	-110	-110	-166
1000	-115	100	-115	-115	-115	-175
1000	-120	100	-120	-120	-120	-184
1000	-125	100	-125	-125	-125	-193
1000	-130	100	-130	-130	-130	-202
1000	-135	100	-135	-135	-135	-211
1000	-140	100	-140	-140	-140	-220
1000	-145	100	-145	-145	-145	-229
1000	-150	100	-150	-150	-150	-238
1000	-155	100	-155	-155	-155	-247
1000	-160	100	-160	-160	-160	-256
1000	-165	100	-165	-165	-165	-265
1000	-170	100	-170	-170	-170	-274
1000	-175	100	-175	-175	-175	-283
1000	-180	100	-180	-180	-180	-292
1000	-185	100	-185	-185	-185	-301
1000	-190	100	-190	-190	-190	-310
1000	-195	100	-195	-195	-195	-319
1000	-200	100	-200	-200	-200	-328
1000	-205	100	-205	-205	-205	-337
1000	-210	100	-210	-210	-210	-346
1000	-215	100	-215	-215	-215	-355
1000	-220	100	-220	-220	-220	-364
1000	-225	100	-225	-225	-225	-373
1000	-230	100	-230	-230	-230	-382
1000	-235	100	-235	-235	-235	-391
1000	-240	100	-240	-240	-240	-400
1000	-245	100	-245	-245	-245	-409
1000	-250	100	-250	-250	-250	-418
1000	-255	100	-255	-255	-255	-427
1000	-260	100	-260	-260	-260	-436
1000	-265	100	-265	-265	-265	-445
1000	-270	100	-270	-270	-270	-454
1000	-275	100	-275	-275	-275	-463
1000	-280	100	-280	-280	-280	-472
1000	-285	100	-285	-285	-285	-481
1000	-290	100	-290	-290	-290	-490
1000	-295	100	-295	-295	-295	-499
1000	-300	100	-300	-300	-300	-508
1000	-305	100	-305	-305	-305	-517
1000	-310	100	-310	-310	-310	-526
1000	-315	100	-315	-315	-315	-535
1000	-320	100	-320	-320	-320	-544
1000	-325	100	-325	-325	-325	-553
1000	-330	100	-330	-330	-330	-562
1000	-335	100	-335	-335	-335	-571
1000	-340	100	-340	-340	-340	-580
1000	-345	100	-345	-345	-345	-589
1000	-350	100	-350	-350	-350	-598
1000	-355	100	-355	-355	-355	-607
1000	-360	100	-360	-360	-360	-616
1000	-365	100	-365	-365	-365	-625
1000	-370	100	-370	-370	-370	-634
1000	-375	100	-375	-375	-375	-643
1000	-380	100	-380	-380	-380	-652
1000	-385	100	-385	-385	-385	-661
1000	-390	100	-390	-390	-390	-670
1000	-395	100	-395	-395	-395	-679
1000	-400	100	-400	-400	-400	-688
1000	-405	100	-405	-405	-405	-697
1000	-410	100	-410	-410	-410	-706
1000	-415	100	-415	-415	-415	-715
1000	-420	100	-420	-420	-420	-724
1000	-425	100	-425	-425	-425	-733
1000	-430	100	-430	-430	-430	-742
1000	-435	100	-435	-435	-435	-751
1000	-440	100	-440	-440	-440	-760
1000	-445	100	-445	-445	-445	-769
1000	-450	100	-450	-450	-450	-778
1000	-455	100	-455	-455	-455	-787
1000	-460	100	-460	-460	-460	-796
1000	-465	100	-465	-465	-465	-805
1000	-470	100	-470	-470	-470	-814
1000	-475	100	-475	-475	-475	-823
1000	-480	100	-480	-480	-480	-832
1000	-485	100	-485	-485	-485	-841
1000	-490	100	-490	-490	-490	-850
1000	-495	100	-495	-495	-495	-859
1000	-500	100	-500	-500	-500	-868
1000	-505	100	-505	-505	-505	-877
1000	-510	100	-510	-510	-510	-886
1000	-515	100	-515	-515	-515	-895
1000	-520	100	-520	-520	-520	-904
1000	-525	100	-525	-525	-525	-913
1000	-530	100	-530	-530	-530	-922
1000	-535	100	-535	-535	-535	-931
1000	-540	100	-540	-540	-540	-940
1000	-545	100	-545	-545	-545	-949
1000	-550	100	-550	-550	-550	-958
1000	-555	100	-555	-555	-555	-967
1000	-560	100	-560	-560	-560	-976
1000	-565	100	-565	-565	-565	-985
1000	-570	100	-570	-570	-570	-994
1000	-575	100	-575	-575	-575	-1003
1000	-580	100	-580	-580	-580	-1012
1000	-585	100	-585	-585	-585	-1021
1000	-590	100	-590	-590	-590	-1030
1000	-595	100	-595	-595	-595	-1039
1000	-600	100	-600	-600	-600	-1048
1000	-605	100	-605	-605	-605	-1057
1000	-610	100	-610	-610	-610	-1066
1000	-615	100	-615	-615	-615	-1075
1000	-620	100	-620	-620	-620	-1084
1000	-625	100	-625	-625	-625	-1093
1000	-630	100	-630	-630	-630	-1102
1000	-635	100	-635	-635	-635	-1111
1000	-640	100	-640	-640	-640	-1120
1000	-645	100	-645	-645	-645	-1129
1000	-650	100	-650	-650	-650	-1138
1000	-655	100	-655	-655	-655	-1147
1000	-660	100	-660	-660	-660	-1156
1000	-665	100	-665	-665	-665	-1165
1000	-670	100	-670	-670	-670	-1174
1000	-675	100	-675	-675	-675	-1183
1000	-680	100	-680	-680	-680	-1192
1000	-685	100	-685	-685	-685	-1201
1000	-690	100	-690	-690	-690	-1210
1000	-695	100	-695	-695	-695	-1219
1000	-700	100	-700	-700	-700	-1228
1000	-705	100	-705	-705	-705	-1237
1000	-710	100	-710	-710	-710	-1246
1000	-715	100	-715	-715	-715	-1255
1000	-720	100	-720	-720	-720	-1264
1000	-725	100	-725	-725	-725	-1273
1000	-730	100	-730	-730	-730	-1282
1000	-735	100	-735	-735	-735	-1291
1000	-740	100	-740	-740	-740	-1300
1000	-745	100	-745	-745	-745	-1309
1000	-750	100	-750	-750	-750	-1318
1000	-755	100	-755	-755	-755	-1327
1000	-760	100	-760	-760	-760	-1336
1000	-765	100	-765	-765	-765	-1345
1000	-770	100	-770	-770	-770	-1354
1000	-775	100	-775	-775	-775	-1363
1000	-780	100	-780	-780	-780	-1372
1000	-785	100	-785	-785	-785	-1381
1000	-790	100	-790	-790	-790	-1390
1000	-795	100	-795	-795	-795	-1399
1000	-800	100	-800	-800	-800	-1408
1000	-805	100	-805	-805	-805	-1417
1000	-810	100	-810	-810	-810	-1426
1000	-815	100	-815	-815	-815	-1435
1000	-820	100	-820	-820	-820	-1444
1000	-825	100	-825	-825	-825	-1453
1000	-830	100	-830	-830	-830	-1462
1000	-835	100	-835	-835	-835	-1471
1000	-840	100	-840	-840	-840	-1480
1000	-845	100	-845	-845	-845	-1489
1000	-850	100	-850	-850	-850	-1498
1000	-855	100	-855	-855	-855	-1507
1000	-860	100	-860	-860	-860	-1516
1000	-865	100	-865	-865	-865	-1525
1000	-870	100	-870	-870	-870	-1534
1000	-875	100	-875	-875	-875	-1543
1000	-880	100	-880	-880	-880	-1552
1000	-885	100	-885	-885	-885	-1561
1000	-890	100	-890	-890	-890	-1570
1000	-895	100	-895	-895	-895	-1579
1000	-900	100	-900	-900	-900	-1588
1000	-905	100	-905	-905	-905	-1597
1000	-910	100	-910	-910	-910	-1606
1000	-915	100	-915	-915	-915	-1615
1000	-920	100	-920	-920	-920	-1624
1000	-925	100	-925	-925	-925	-1633
1000	-930	100	-930	-930	-930	-1642
1000	-935	100	-935	-935	-935	-1651
1000	-940	100	-940	-940	-940	-1660
1000	-945	100	-945	-945	-945	-1669
1000	-950	100	-950	-950	-950	-1678
1000	-955	100	-955	-955	-955	-1687
1000	-960	100	-960	-960	-960	-1696
1000	-965	100	-965	-965	-965	-1705