



NATIONAL TRANSPORTATION SAFETY BOARD

Office of Aviation Safety
Washington, D.C. 20594

April 3, 2020

Weather Study

METEOROLOGY

CEN20FA093

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A. ACCIDENT

Location: Coleman, Texas
Date: February 20, 2020
Time: about 0600 central standard time (1200 UTC¹)
Aircraft: Type - Beech 200; Registration - N860J

B. METEOROLOGIST

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Senior Meteorologist
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C. DETAILS OF THE INVESTIGATION

The National Transportation Safety Board's meteorological specialist did not travel in support of this accident investigation and gathered all weather data remotely. Unless otherwise noted, all times are in central standard time (CST) for February 20, 2020 (based upon the 24-hour clock), directions are referenced to true north, distances are in nautical miles and heights are above mean sea level (msl) unless otherwise noted.

Coordinates used for the accident location: 32.050833° north latitude, 99.570000° west longitude, at an elevation of about 1,740 feet.

D. WEATHER INFORMATION

1.0 Upper Air Data

A High-Resolution Rapid Refresh (HRRR) model² sounding (figure 1) for the accident location at 0600 CST was retrieved from the National Oceanic and Atmospheric Administration's (NOAA) Air Resources Laboratory. Near the surface, the wind was from the north-northeast at about 10 knots and remained from this direction to about 5,200 feet where the magnitude was about 20 knots. Above this level the wind *backed*³ with height and decreased in magnitude to a west wind at about 10 knots near 9,300 feet. Calculations made by the Rawinsonde OBservation Program did

¹ UTC – abbreviation for Coordinated Universal Time

² The HRRR is a NOAA real-time three-kilometer resolution, hourly-updated, cloud-resolving, convection-allowing atmospheric model, initialized by three-kilometer grids with three-kilometer radar assimilation. Radar data is assimilated in the HRRR every 15 minutes over a one-hour period.

³ A backing wind's wind barbs turn counterclockwise with increasing height

identified moderate and severe turbulence potential about 5,200 feet, but it did not identify any icing threat. The freezing level was at about 11,000 feet, however, there was a deep temperature inversion present between about 3,700 and 7,000 feet, and the temperature at about 3,700 was approximately 1° Celsius (C).

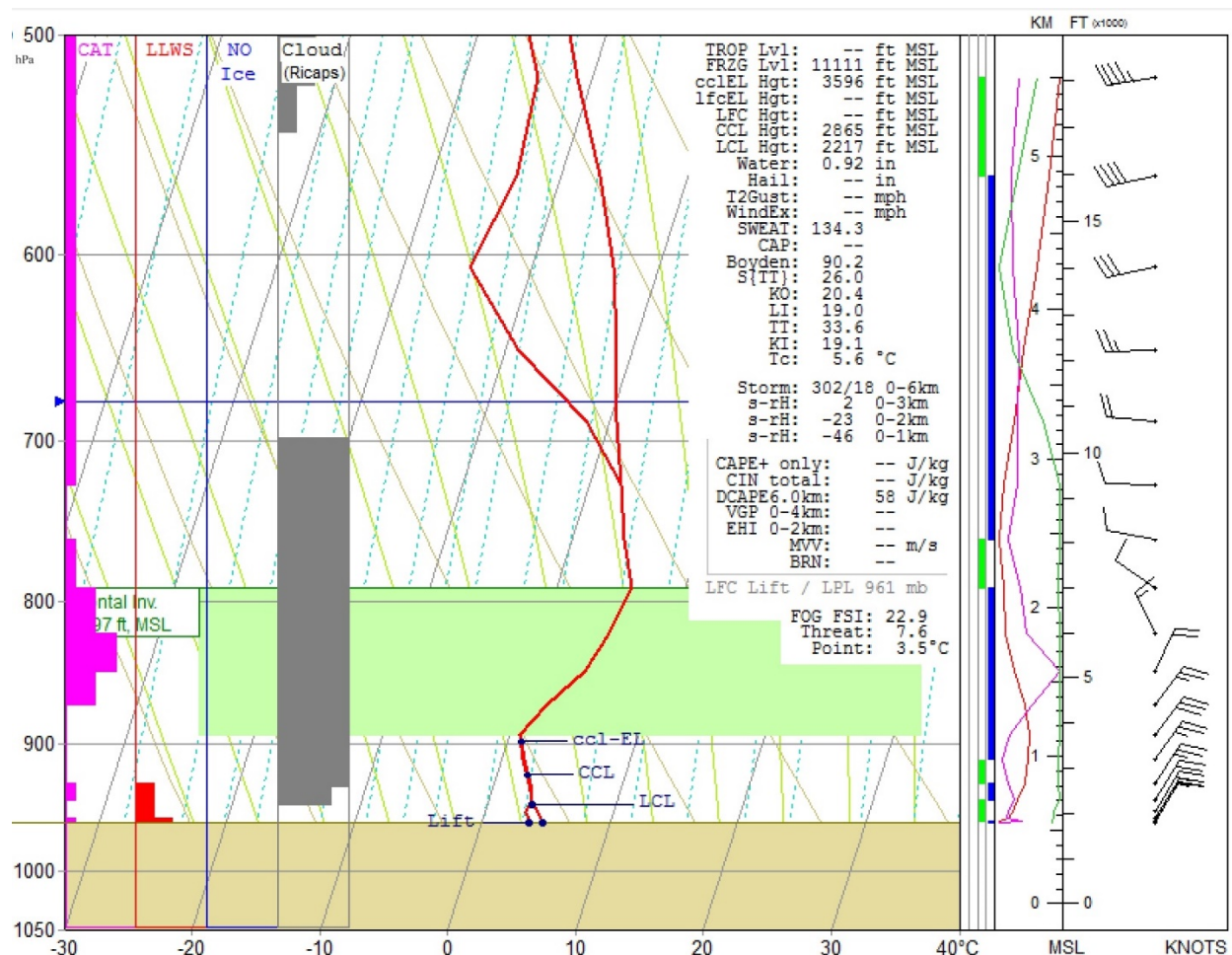


Figure 1 – HRRR model sounding data in SkewT/LogP format for 0600 CST at the accident site, surface to 600 hectopascals.

2.0 Pilot Reports

Presented below are the publicly disseminated⁴ pilot reports (PIREPs) made within 100 miles of Abilene Regional Airport (ABI; which was located 21 miles north-northwest of the accident location) and two hours of the accident time.

⁴ These do not include pilot reports only broadcast via radio.
MET WEATHER STUDY

At 0545 CST, a Beech 200 aircraft over ABI reported freezing drizzle, a temperature of 2°C, light rime icing between 6,000 and 8,000 feet.

*ABI UA /OV ABI090010/TM 1117/FL085/TP E135/SK BKN028-030 RGD TOPS 060
OVC075 TOPS 085/RM BASES RAGGED/ CLEAR ABOVE 2ND LAYER 085*

*ABI UA /OV ABI/TM 1145/FL060/TP BE20/WX FZ DZ/TA 02/IC LGT RIME 060-
080/RM ZFW AWC-WEB/*

*ABI UA /OV ABI020004/TM 1315/FL031/TP E135/SK OVC031-TOP033/OVC048/IC
NEG*

SJT UA /OV SJT210003/TM 1322/FLDURGD/TP C208/SK B030 OVC

BWD UA /OV BWD /TM 1325 /FL022 /TP C208 /SK BASE 022/RM AWC-WEB

ABI UA /OV ABI175004/TM 1340/FL030/TP C208/SK BKN030-TOPUNKN

ABI UA /OV ABI130035/TM 1348/FL075/TP C208/SK TOP075/RM AWC-WEB/

3.0 Pre-Flight Weather Briefing

Information provided by ForeFlight related to preflight activity for the accident aircraft for the accident flight can be found in Attachment 1.

E. LIST OF ATTACHMENTS

Attachment 1 – Information provided by ForeFlight related to preflight activity for the accident aircraft for the accident flight.

Submitted by:

Mike Richards
Senior Meteorologist

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