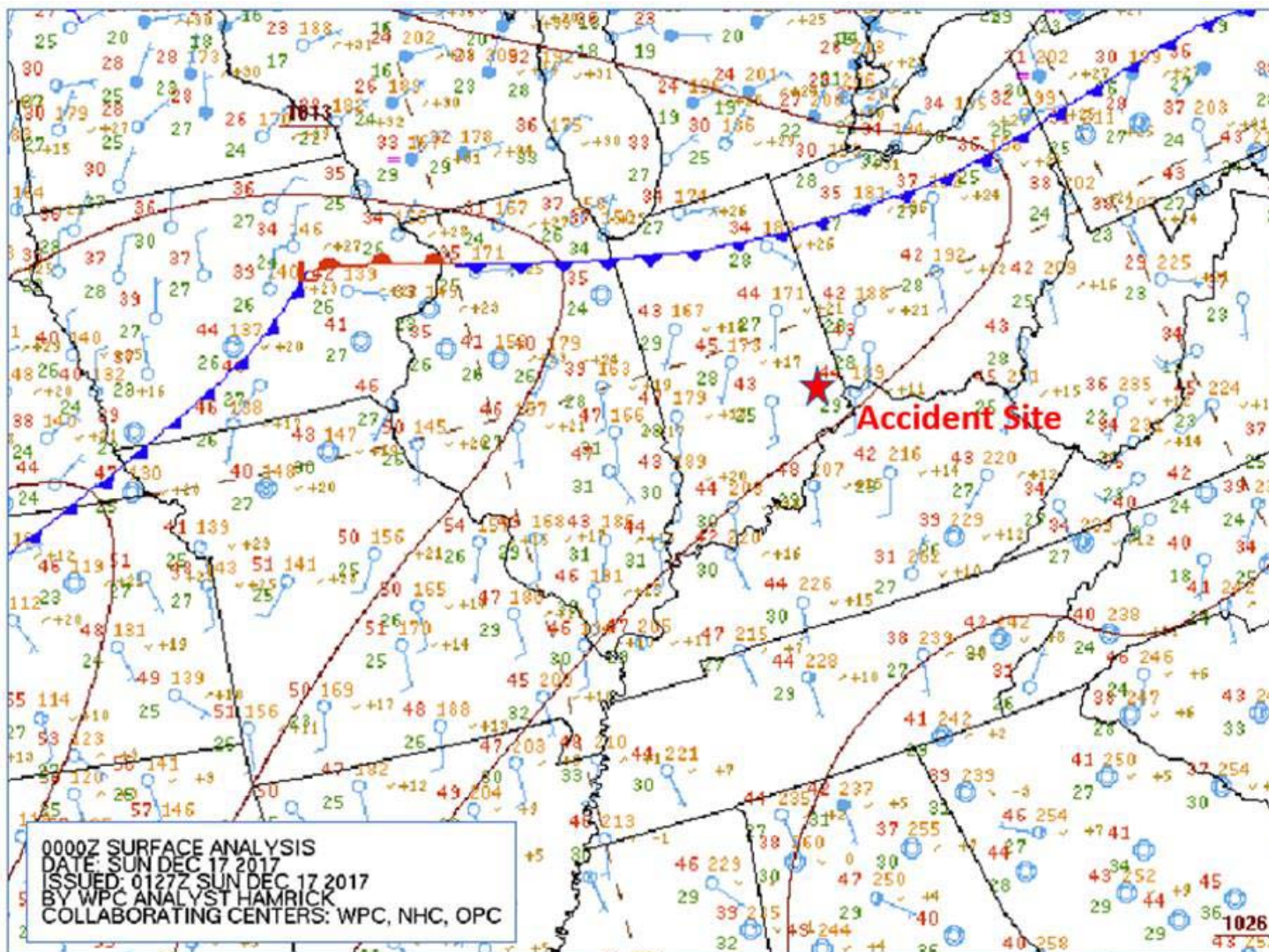


Sorensen Tim

From: Eick Donald
Sent: Monday, February 26, 2018 11:37 AM
To: Sorensen Tim
Cc: O'Callaghan John
Subject: CEN18FA053 - Oldenburg, IN Weather

Weather Conditions on December 16, 2017 in the vicinity of Oldenburg, Indiana

Synoptic Conditions – The NWS Surface Analysis chart for 1900 EST (0000Z) depicted a cold front extending over Pennsylvania, northern Ohio, Indiana, Illinois, into Iowa where a low pressure system at 1013-hPa was located along the front associated with a frontal wave. The station models surrounding the accident site depicted clear skies, winds from the south at 10 knots or less, with temperatures in the 40's degrees Fahrenheit. No significant weather was depicted in the vicinity of the accident site.



The regional weather radar mosaic immediately surrounding the period depicted no significant weather echoes over the route.

Observations - Batesville Airport (KHLB), Indiana at an elevation of 975 feet and a magnetic variation of 5° West, had an AWOS and reported the following conditions:

Batesville Airport weather at 2055 EST, automated, wind variable at 5 knots, visibility 10 miles or more, ceiling overcast at 7,500 feet agl, temperature 5° Celsius (C), dew point -2° C, altimeter 30.10 inches of mercury. Remarks: automated observation system without a precipitation discriminator.

The raw observations were as follows:

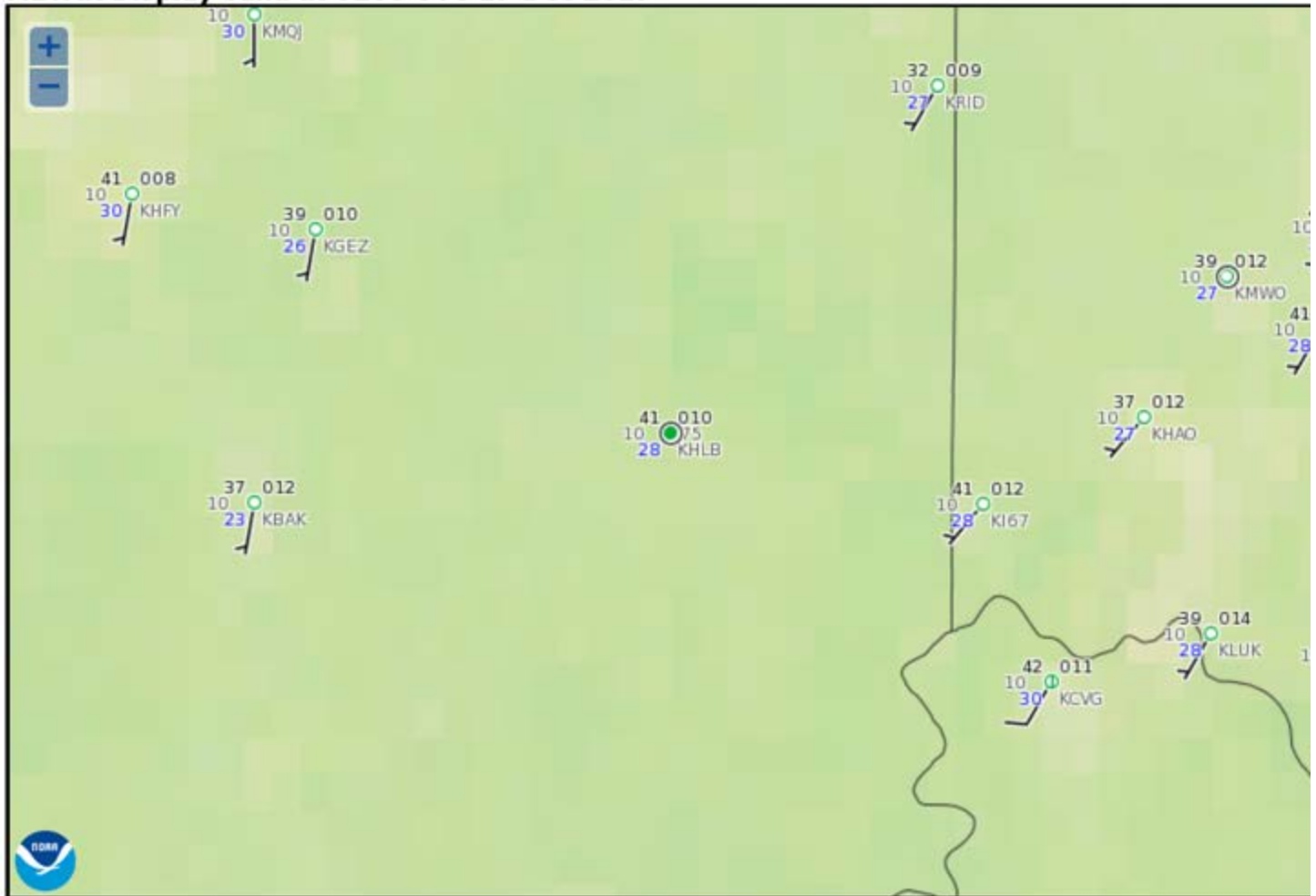
METAR KHLB 170115Z AUTO VRB05G10KT 10SM OVC080 06/M02 A3009
METAR KHLB 170135Z AUTO VRB05G10KT 10SM OVC075 05/M02 A3009
METAR KHLB 170155Z AUTO VRB05KT 10SM OVC075 05/M02 A3010 RMK A01=
Accident 17DEC 0157Z
METAR KHLB 170215Z AUTO VRB04KT 10SM OVC075 06/M02 A3011 RMK A01=
METAR KHLB 170235Z AUTO VRB05KT 10SM OVC080 05/M02 A3011 RMK A01=

The conditions at Columbus Municipal Airport (KBAK) near the time of the aircrafts departure were as follows:

KBAK 162345Z 19013KT 10SM SKC 06/M04 A3006
KBAK 170045Z 19009KT 10SM SKC 05/M04 A3008
KBAK 170150Z 19005KT 10SM SKC 03/M05 A3012
KBAK 170245Z 18006KT 10SM SKC 01/M05 A3013 RMK LAST

A METAR display from NWS Aviation Weather Center - depicted VFR conditions over the area and is included below.

METAR Display valid at 0200 UTC 17 Dec 2017



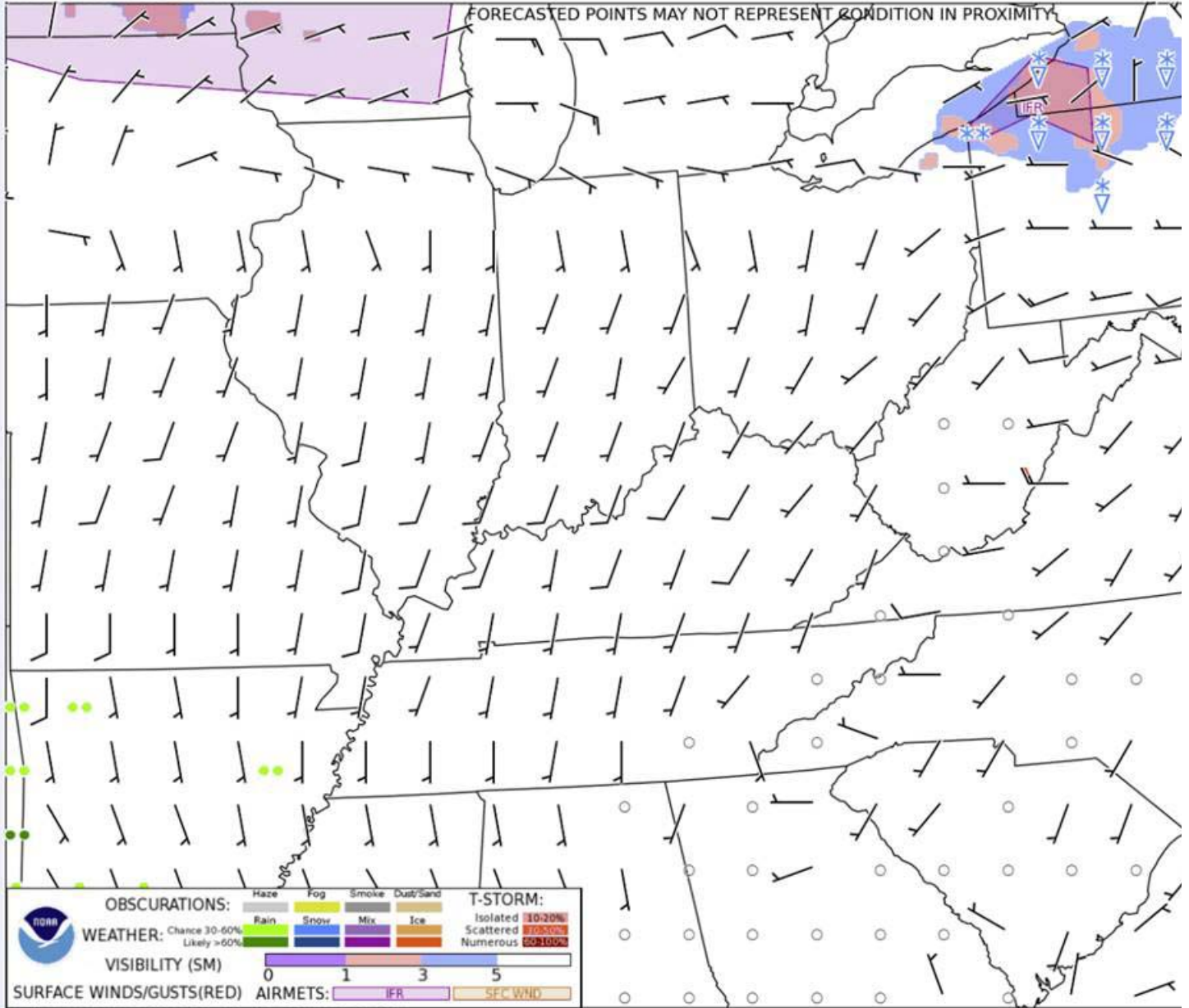
Terminal Aerodrome Forecast (TAF) - Closest TAF to the accident site was for KCVG 33 miles southeast of the accident site:

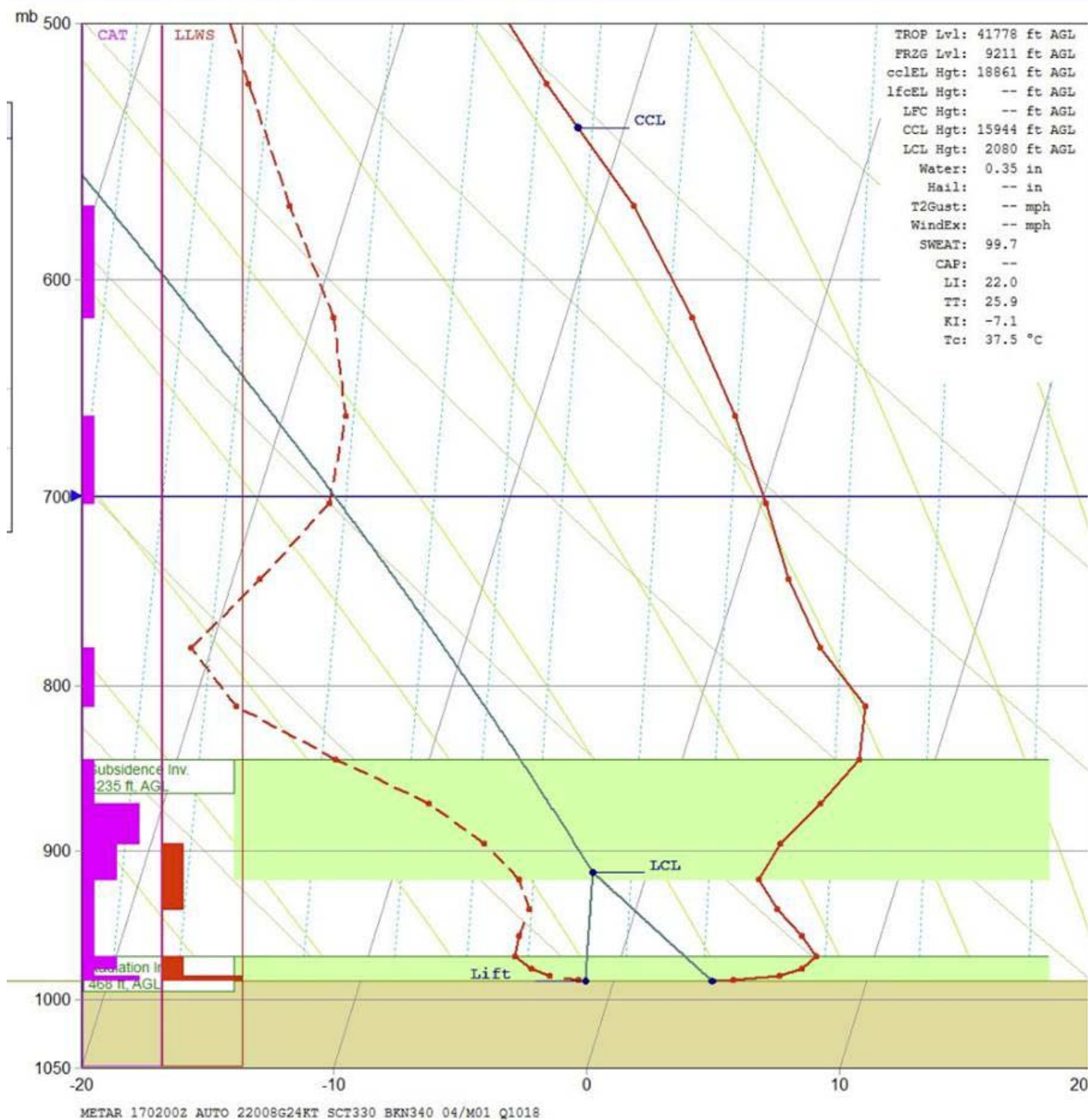
*KCVG 162100Z 1621/1724 22010G18KT P6SM FEW250
FM162200 21010KT P6SM SCT250
FM171000 19005KT P6SM BKN200
FM171400 19006KT P6SM OVC100
FM171600 19007KT P6SM -SHRA OVC050=*

Graphic Area Forecast (GFA) images – from the NWS Aviation Weather Center website for the period indicated VFR conditions for the route with no significant cloud cover expected.

AVIATION SURFACE FORECAST

FORECASTED POINTS MAY NOT REPRESENT CONDITION IN PROXIMITY





The HRRR 2100 EST sounding parameters from the surface through 19,000 ft were as follows:

Height (ft-MSL)	Pres (mb)	T (C)	Td (C)	RH (%)	DD / FF (deg / kts)	CAT (FAA)	LLWS	Icing - Type (AFGWC method)
860	987	3.9	-1.1	70	225 / 8			
887	986	4.7	-1.4	65	225 / 8	SVR	SEVER	
969	983	6.5	-2.6	52	226 / 21	LGT	LIGHT	
1106	978	7.3	-3.4	47	226 / 24	MDT	LIGHT	
1328	970	7.7	-4.2	43	227 / 31	LGT		
1720	956	6.9	-4.3	45	229 / 34	LGT		
2231	938	5.6	-4.2	49	232 / 37	LGT	LIGHT	
2808	918	4.5	-5.0	50	241 / 38	MDT	LIGHT	
3487	895	4.9	-6.8	42	256 / 35	SVR		
4247	870	6.0	-9.5	32	275 / 29	LGT		
5095	843	7.0	-13.7	21	279 / 26			
6104	812	6.6	-18.3	15	280 / 24	LGT		
7215	779	4.1	-20.8	14	289 / 24			
8507	742	2.0	-18.9	20	291 / 24			
9931	703	0.2	-17.1	26	287 / 27	LGT		
11544	661	-2.1	-17.5	30	285 / 32			
13372	616	-5.0	-19.2	32	282 / 37	LGT		
15405	569	-8.7	-22.3	32	275 / 42			
17577	522	-13.6	-25.4	36	271 / 45			
19601	481	-17.9	-28.2	40	268 / 47			

In-Flight Weather Advisories - the NWS had no advisories in effect; no SIGMETs, Convective SIGMETs, Center Weather Advisories, or AIRMETs.

Winds Aloft Forecast - Note strong southwesterly winds of 36 knots or more at 3,000 ft.

WINDS ALOFT FORECASTS

DATA BASED ON 161800Z

VALID 170000Z FOR USE 2000-0300Z. TEMPS NEG ABV 24000

FT	3000	6000	9000	12000	18000	24000	30000	34000	39000
IND	2539	2830+06	2930+02	2839-03	2851-16	2759-27	276943	279550	772359
CVG	2536	2827+06	2930+02	2839-03	2850-16	2758-27	277342	771749	773358
LOU	2432	2824+07	2828+03	2732-02	2741-15	2749-27	279839	772749	763458

Astronomical Conditions: for Batesville, Ripley County, IN on December 17, 2017

Moonset - 1635 EST Sunset - 1719 EST End civil twilight - 1749 EST

At the time of the accident both the moon and the sun were more than 15 degrees below the horizon and provided no illumination.

Dark nighttime conditions existed at the time of the accident.

Don Eick

NTSB Senior Meteorologist