



RECORD OF EMAIL

Samantha Link
Aviation Accident Investigator
Western Pacific Region

Date: February 6, 2018
Person Contacted: Mr. Donald Eick (NTSB Senior Meteorologist)
NTSB Accident Number: WPR18FA074

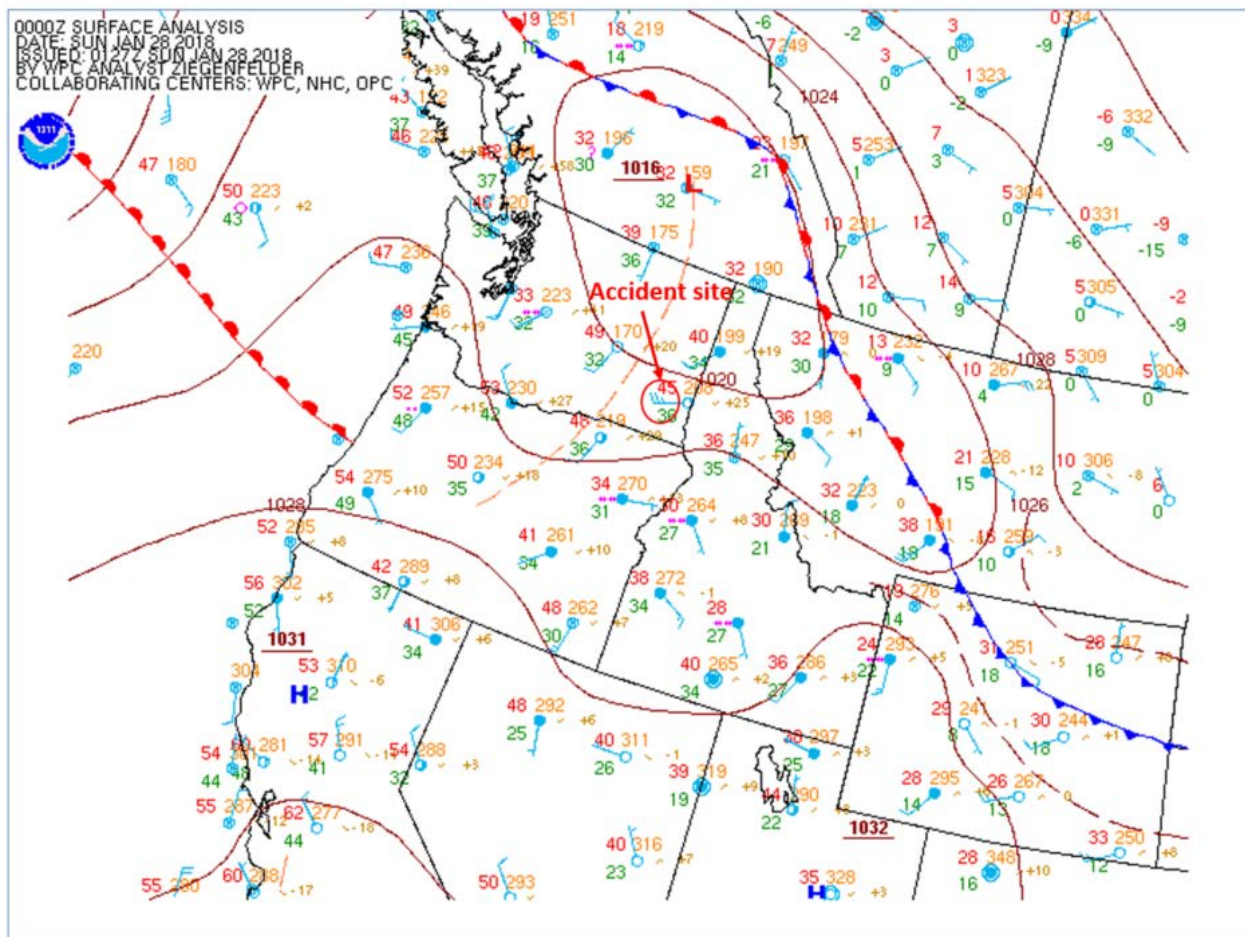
Narrative:

Mr. Eick provided the following weather study via email:

Weather Conditions on January 27, 2018 around Pomeroy, Washington

Synoptic conditions - The northwest section of the NWS Surface Analysis Chart for 1600 PST (0000Z on January 28, 2018) is included below with the approximate accident site marked. A low pressure system at 1016-hPa was located north in Canada with a trough of low-pressure extending southward across eastern Washington and into central Oregon. The accident site was located immediately ahead of the trough in an area favorable for lifting and general convergence supporting clouds. The station models surrounding the accident site depicted west-southwest winds of 25 knots with higher gusts, scattered clouds, temperatures in the 40's degrees Fahrenheit °(F), and dew points in the upper 30's F.

Intentionally left blank. Please proceed to next page.



A review of the National Composite Reflectivity imagery surrounding the period depicted no significant weather echoes over the region immediately surrounding the accident from 1500 through 1700 PST.

Observations – The surrounding airports were documented. **Pullman – Moscow Regional Airport (KPUW)**, Pullman/Moscow, Washington located about 25 miles ENE of the accident at 2555 ft, and a magnetic variation of 15° W. The airport had an ASOS and reported the following conditions at the time of the accident:

Pullman/Moscow weather observation at 1553 PST, wind from 250° at 23 knots gusting to 35 knots, visibility 10 miles or more, a few clouds at 3,500 ft agl, few clouds at 5,000 ft, temperature 7 Celsius (C), dew point 2 C, altimeter 30.10 inches of mercury (Hg). Remarks; automated observation system, peak wind from 240 at 37 knots occurred at 1530 PST, sea level pressure 1020.8-hPa.

The raw observations were as follows surrounding the period:

METAR KPUW 272253Z AUTO 24025G34KT 10SM FEW040 BKN055 08/03 A3007 RMK AO2 PK WND 24042/2203 SLP195 T00830028

METAR KPUW 272353Z AUTO 25023G35KT 10SM FEW035 FEW050 07/02 A3010 RMK AO2 PK WND 24037/2330 SLP208 T00720022 10094 20017 53025

METAR KPUW 280053Z AUTO 25018G26KT 10SM CLR 06/02 A3014 RMK AO2 PK WND 24036/2355 SLP222 T00610017

METAR KLWS 272256Z 20017G27KT 10SM SCT070 09/01 A3008 RMK AO2 PK WND
21027/2223 SLP192 T00940011
METAR KLWS 272356Z 19015KT 10SM CLR 09/02 A3011 RMK AO2 SLP205 T00890017
10100 20050 53022
METAR KLWS 280056Z 19015KT 10SM CLR 08/02 A3015 RMK AO2 SLP217 T00830017

METAR KALW 272253Z 22016G23KT 10SM BKN070 OVC110 11/03 A3014 RMK AO2 PK
WND 23027/2157 SLP209 T01110028
METAR KALW 272353Z 21012KT 10SM FEW065 BKN110 11/03 A3016 RMK AO2 SLP219
60000 T01060033 10133 20100 51036
METAR KALW 280053Z 22018G24KT 10SM CLR 11/03 A3019 RMK AO2 SLP228
T01060028

METAR Display valid at 2355 UTC 27 Jan 2018

[permalink](#)

Legend:

- T - 26 966 ALT M
- VIS - 0.5 CIG
- Wx - 19 KSPD - Id
- DP - 19 KSPD - Id
- Wind - 19 KSPD - Id

Wind symbols: Calm, 15kt, 60kt, 25G30kt

Flt Cat: MVFR (blue dot), IFR (red dot), LIFR (purple dot)

Map Data:

- 49 002 KEPH
- 51 008 K155
- 54 013 KPSC
- 51 016 KALW
- 53 018 KHRI
- 48 018 KPDT
- 45 010 KPUW
- 49 008 KLWS
- 37 010 KGIC

Terminal Aerodrome Forecasts (TAF) for the region for the airports listed previously:

TAF KPUW 271739Z 2718/2818 13014KT P6SM VCSH SCT025 OVC040
FM271900 18015G22KT P6SM -SHRA BKN025 OVC040
FM272100 23018G25KT P6SM BKN050 BKN200
FM280400 24011KT P6SM SCT050 BKN200
FM281200 10006KT 5SM -RA BR BKN025 OVC040

TAF KPUW 272337Z 2800/2824 24025G34KT P6SM FEW040 BKN060
FM280400 24017G23KT P6SM SCT200
FM280800 25009KT 6SM BR BKN010
FM281500 13006KT 5SM -SHRA BKN025 OVC040

AMD TAF KLWS 272133Z 2722/2818 20020G28KT P6SM SCT070
FM280100 20015G21KT P6SM SCT150 SCT200
FM280400 20008KT P6SM BKN100 OVC200
FM280800 VRB03KT P6SM OVC100
FM281300 10005KT P6SM VCSH OVC050

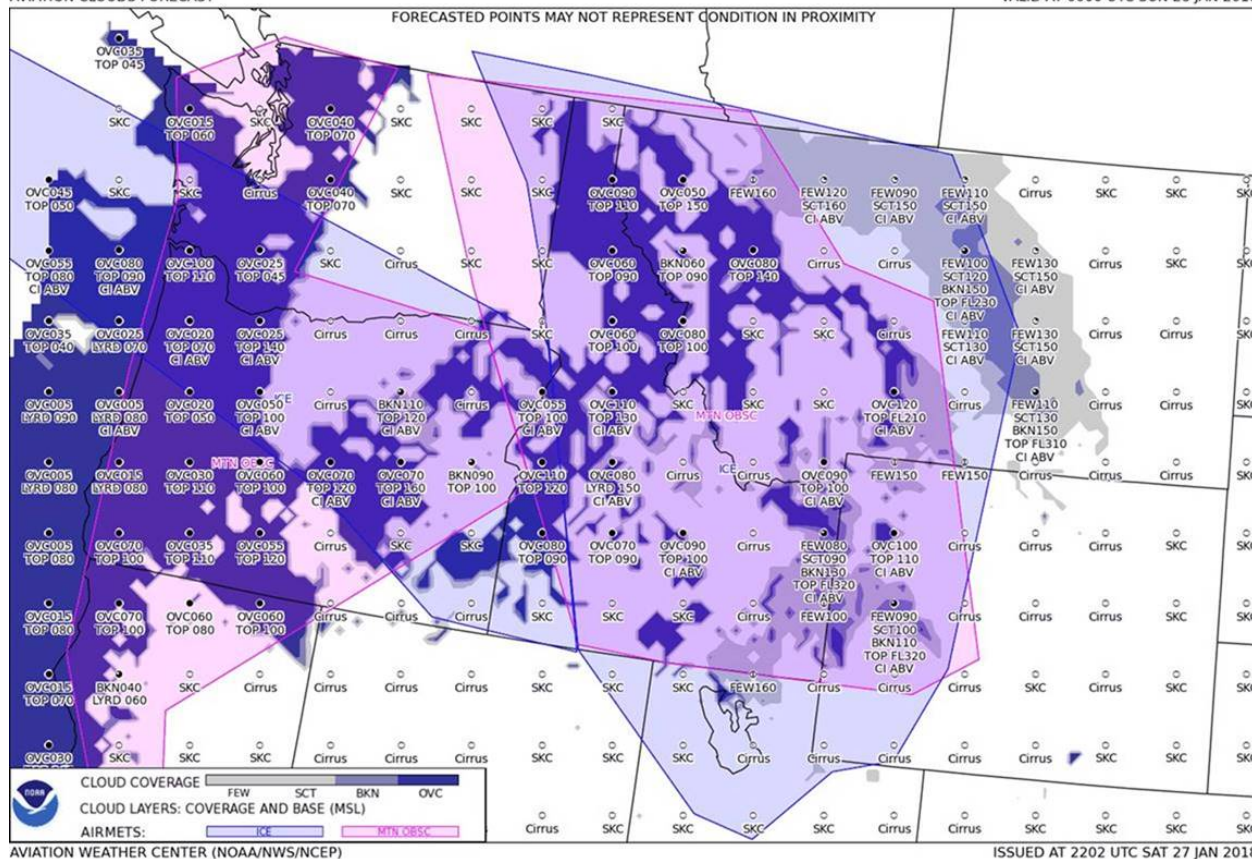
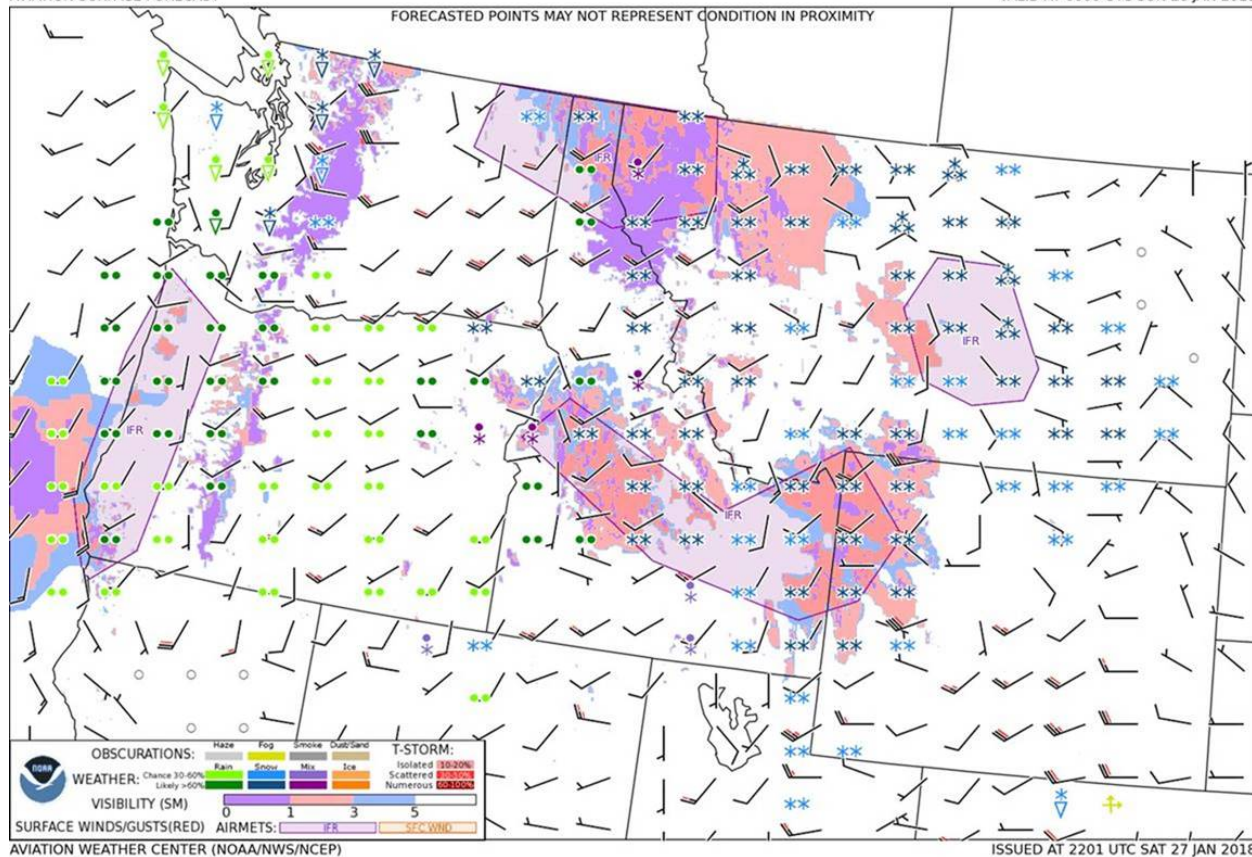
TAF KLWS 272337Z 2800/2824 20020G28KT P6SM SCT070 BKN200
FM280600 20008KT P6SM BKN100 OVC200
FM281500 16005KT P6SM VCSH OVC050
FM282100 17009KT P6SM SCT060 SCT150

AMD TAF KALW 272132Z 2722/2818 21020G30KT P6SM BKN080
FM280300 19014KT P6SM SCT030 OVC100
FM280600 18010KT P6SM VCSH BKN040 OVC070
FM281200 17004KT P6SM -RA BKN015 OVC030

TAF KALW 272333Z 2800/2824 22015KT P6SM BKN080
FM280300 19011KT P6SM SCT030 OVC050
FM280600 16008KT P6SM -RA OVC025
FM281500 17004KT P6SM OVC035
FM282000 22008KT P6SM BKN050

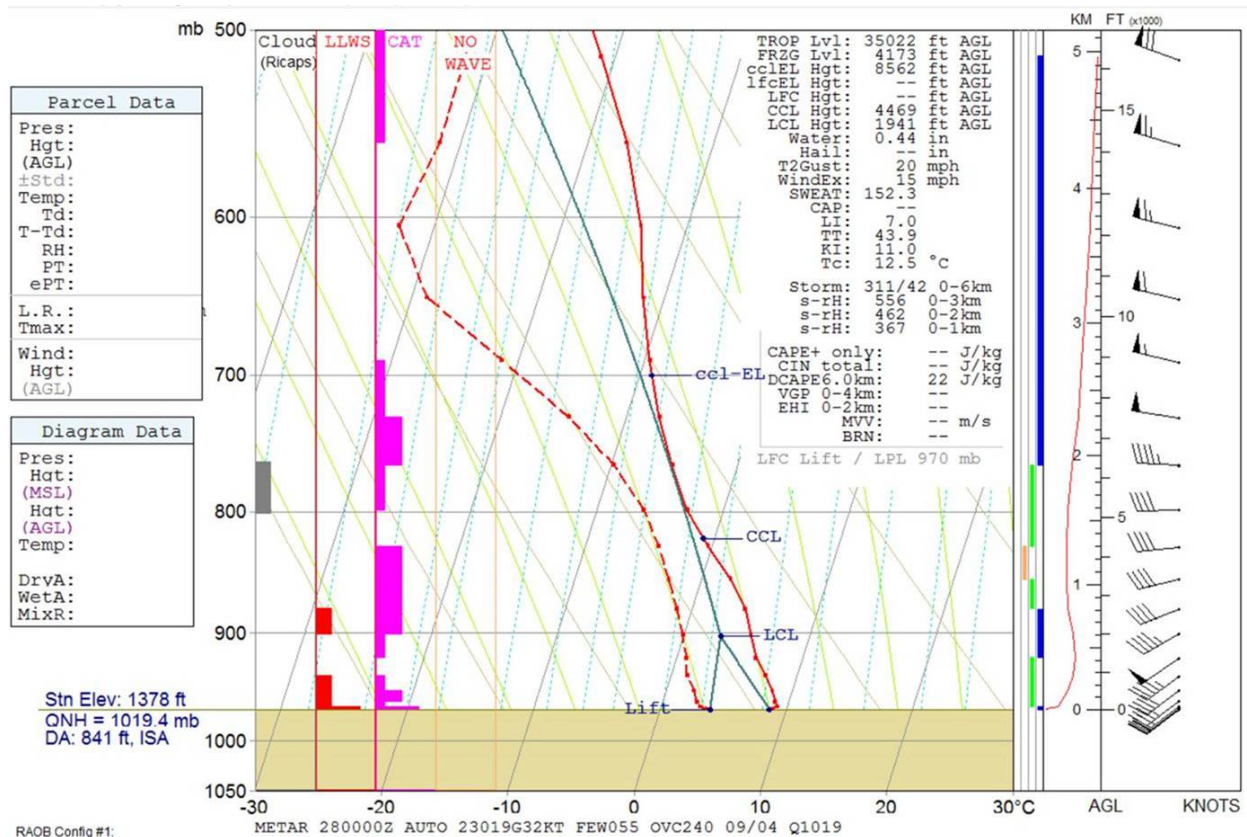
The NWS AWC **Graphic Area Forecast (GFA)** valid at the time are included below and depicted strong WSW winds of 25 knots over the region, with predominately VFR conditions expected; however, a mountain obscuration advisory bordered the region.

Intentionally left blank. Please proceed to next page.



Numerical Model Sounding – a High Resolution Rapid Refresh (HRRR) model over the accident site for 1600 PST is included below. The model sounding depicted a surface wind from 230° a 19 knots with possible gusts to 32 knots, temperature of 8° C (47.7° F), dew point of 4° C (39° F), a relative humidity of 72%, with a density altitude of 841 ft. The sounding expected a cloud layer near 5,000 ft agl with tops near 6,000 ft. The wind profile depicted WSW winds veering to the W with height with increasing speeds. A low-level wind maximum was identified at 1,000 ft above the surface (2,750 ft msl) from 230° at 48 knots. The mean 0 to 6 kilometer or 18,000 ft wind was from 280 at 56 knots, and the level of maximum wind was at 36,000 ft from 290° at 118 knots and was located immediately below the tropopause at 36,400 ft.

As a result of the strong low-level winds there was a high potential for low-level wind shear and turbulence. A table of the sounding parameters follows the skew T log P diagram.



Intentionally left blank. Please proceed to next page.

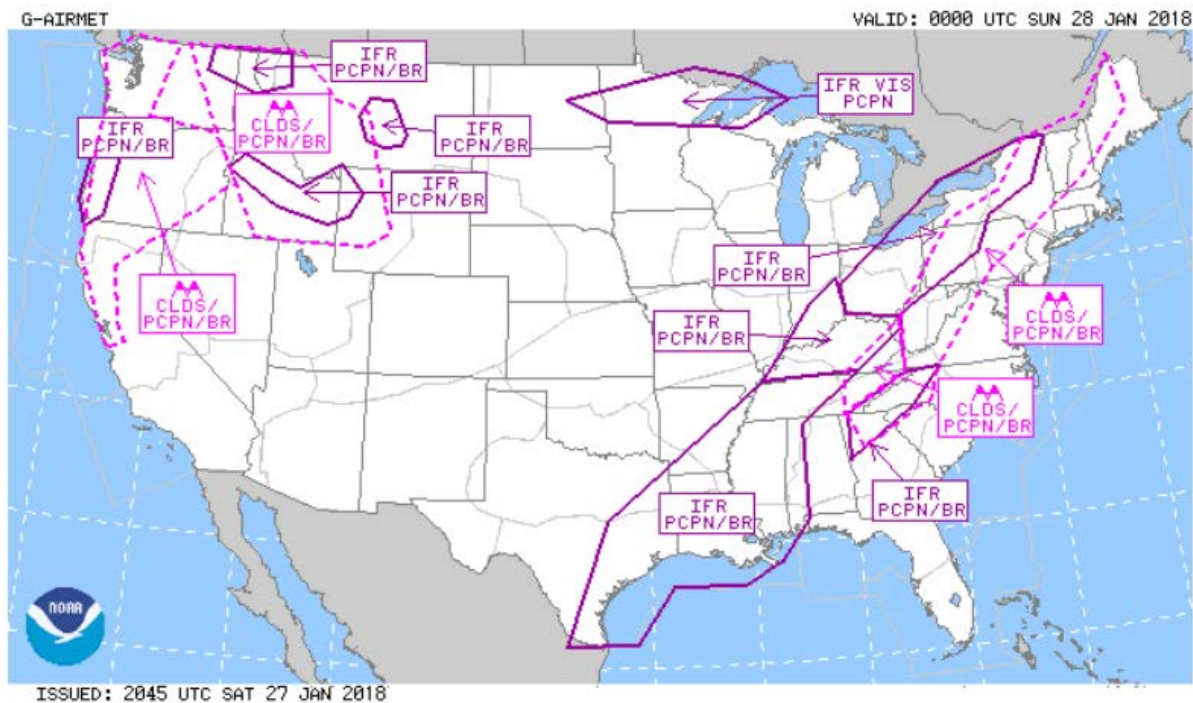
Pilot Reports or PIREPs – the following reports were noted over eastern Washington during the period:

GEG UA /OV GEG120020/TM 1844/FL105/TP 319/TB CONT LT CHOP/RM DURD 170-105
GEG UA /OV GEG200045/TM 0052/FL075/TP C208/WV 278045KT/TB MOD
CHOP/RM..ZSE

Inflight Weather Advisories current for the region at the time included an AIRMET Sierra for mountain obscuration conditions and AIRMET Tango for low-level wind shear and turbulence due to the strong winds.

There were no SIGMETs, Convective SIGMETs, or Center Weather Advisories (CWA) current for the region at the time of the accident.

SIERRA 2018-01-28 00:00:00



WAUS46 KKCI 272309 AAA

WA6S

-SFOS WA 272309 AMD

AIRMET SIERRA UPDT 5 FOR IFR AND MTN OBSCN VALID UNTIL 280300

.

AIRMET IFR...WA ID MT

FROM 60WSW YQL TO 50ESE FCA TO 40WSW MLP TO 40NW EPH TO 40SE YDC TO
60WSW YQL

CIG BLW 010/VIS BLW 3SM PCPN/BR. CONDS CONTG BYD 03Z ENDG 03-06Z.

.

AIRMET IFR...WA OR CA AND CSTL WTRS

FROM 40SSE HQM TO 40E BTG TO 20NE OED TO 50N FOT TO 100SSW ONP TO
20WNW ONP TO 40SSE HQM

CIG BLW 010/VIS BLW 3SM PCPN/BR. CONDS DVLPG 21-00Z. CONDS CONTG BYD
03Z THRU 09Z.

.

.

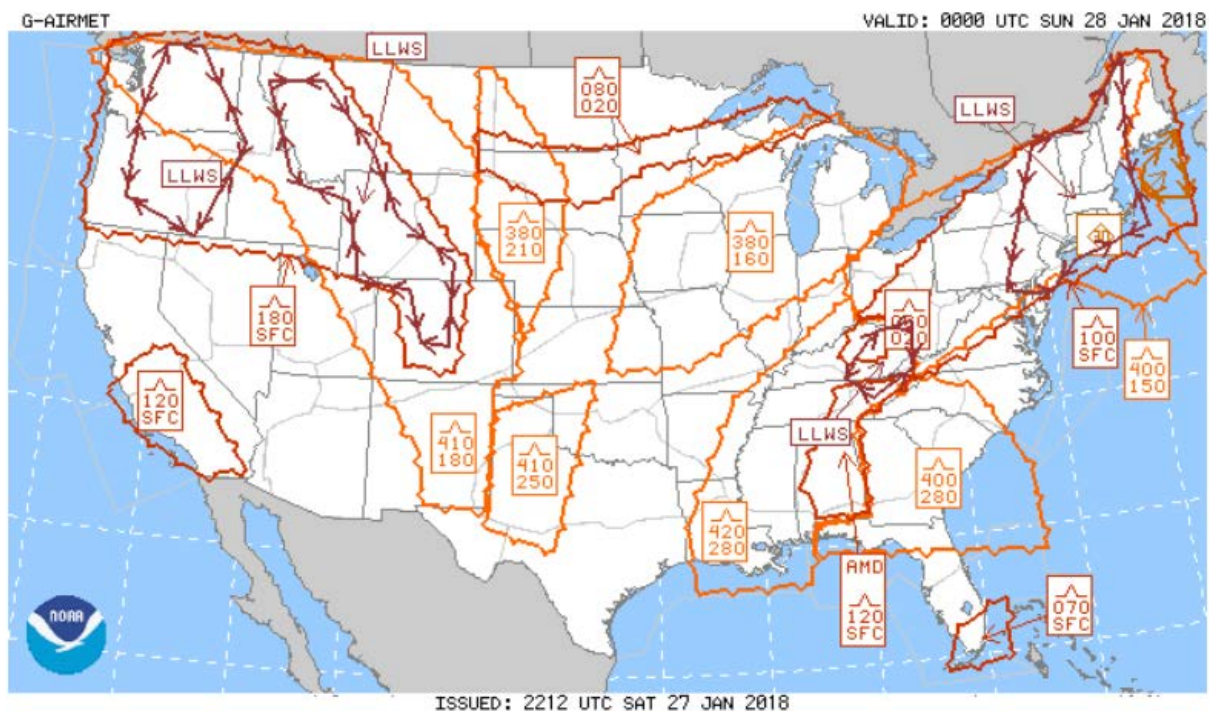
RECORD OF EMAIL

Page 8 of 10

AIRMET MTN OBSCN...WA OR CA NV
 FROM 20N HUH TO 30SSE YDC TO 30NNW BOI TO 50SE REO TO 40SE LKV TO
 20NNW FMG TO 20SE RBL TO
 30S MOD TO 30W SNS TO 20SSW FOT TO 70W OED TO 20S HQM TO 20WSW TOU TO
 20N HUH
 MTNS OBSC BY CLDS/PCPN/BR. CONDS CONTG BYD 03Z THRU 09Z.

AIRMET MTN OBSCN...WA OR ID MT WY NV UT CO...UPDT
 FROM 40SW YQL TO GTF TO HVR TO 40ENE BIL TO 30SW BIL TO 40SSE BOY TO
 DDY TO DEN TO HBU TO JNC
 TO 60S OCS TO BVL TO 20N ELY TO 40SSE BAM TO 50SE REO TO 30NNW BOI TO
 30SSE YDC TO 40SW YQL
 MTNS OBSC BY CLDS/PCPN/BR. CONDS CONTG BYD 03Z THRU 09Z.

TANGO 2018-01-28 00:00:00



WAUS46 KKCI 272045
 WA6T
 -SFOT WA 272045
 AIRMET TANGO UPDT 4 FOR TURB AND LLWS VALID UNTIL 280300

AIRMET TURB...WA OR CA AND CSTL WTRS
 FROM YDC TO 50WSW YXC TO 50SE REO TO 40SE LKV TO 70N FMG TO 60NE RBL
 TO 60NNW FOT TO
 70SSW ONP TO 30NNW HQM TO 30NW TOU TO 30WNW HUH TO YDC
 MOD TURB BLW FL180. CONDS CONTG BYD 03Z THRU 09Z.

LLWS POTENTIAL...WA OR CA ID MT NV
 BOUNDED BY 50ESE YDC-70S YXC-60S MLP-60E BOI-40NE TWF-80NNE FMG-
 40SE OED-40NNE OED-20WSW HUH-30SW YDC-50ESE YDC
 LLWS EXP. CONDS CONTG BYD 03Z THRU 09Z.

Winds and Temperature Aloft Forecast (FD):

WINDS ALOFT FORECASTS

DATA BASED ON 271800Z

VALID 280000Z FOR USE 2000-0300Z. TEMPS NEG ABV 24000

<i>FT</i>	<i>3000</i>	<i>6000</i>	<i>9000</i>	<i>12000</i>	<i>18000</i>	<i>24000</i>	<i>30000</i>	<i>34000</i>	<i>39000</i>
<i>LWS</i>	<i>2318</i>	<i>2642-01</i>	<i>2847-08</i>	<i>2858-12</i>	<i>2973-22</i>	<i>3093-33</i>	<i>800948</i>	<i>792157</i>	<i>790758</i>
<i>GEG</i>		<i>2538-03</i>	<i>2837-10</i>	<i>2946-13</i>	<i>2979-22</i>	<i>7900-33</i>	<i>791549</i>	<i>792057</i>	<i>299457</i>
<i>YKM</i>	<i>2728</i>	<i>2851+00</i>	<i>2952-03</i>	<i>2855-07</i>	<i>2976-20</i>	<i>2976-32</i>	<i>298947</i>	<i>790256</i>	<i>780063</i>

END.

Submitted by: Samantha Link