

Flying a Boeing 757 in Complex Terrain and Impactful Weather

Friends and Partners in Aviation Weather

October 9, 2025

Logan, UT

Captain David Strand (ret.)

Areas of Concern

Same type of issues whether for small or large aircraft



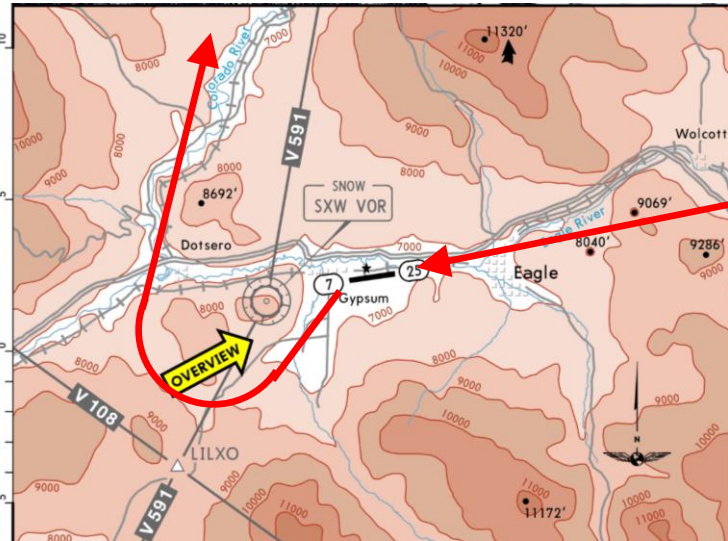
- Piper Cherokee
 - Weather Information Availability
 - Rapidly Changing Conditions
 - Localized Effects
 - Winter Weather / Icing
 - Aircraft Performance
 - ATC Radar Coverage
 - Training/Special Qualifications



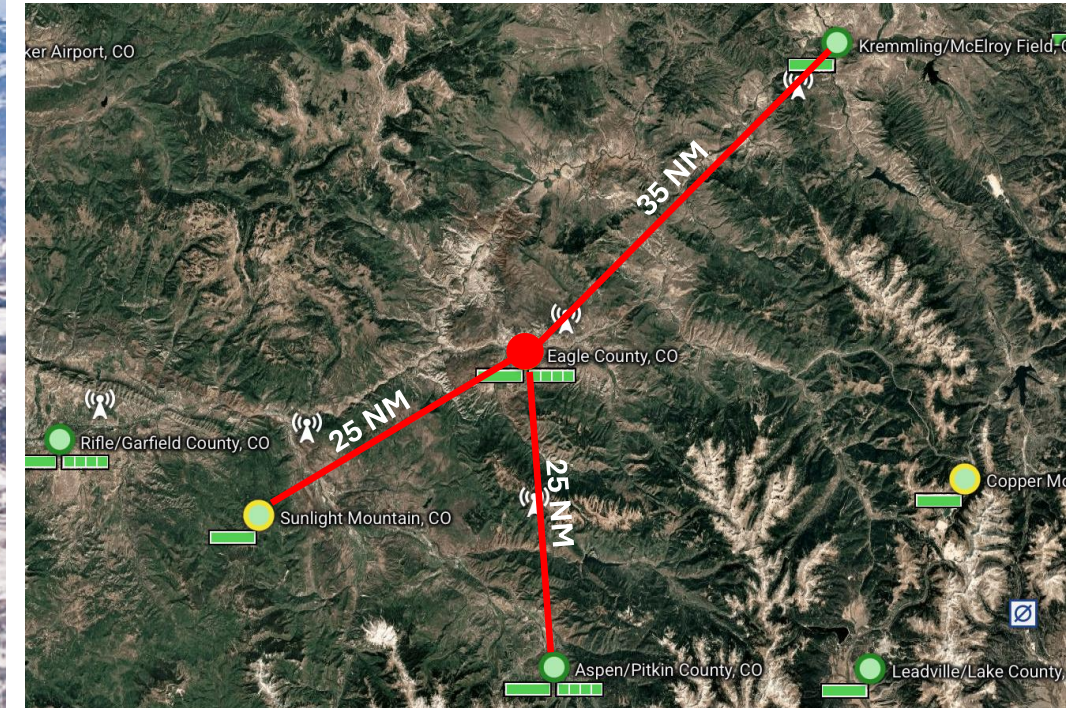
- Boeing 757
 - Weather Information Availability
 - Rapidly Changing Conditions
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Examples of Complex Terrain

Eagle/Vail, CO - Elevation 6547 ft MSL



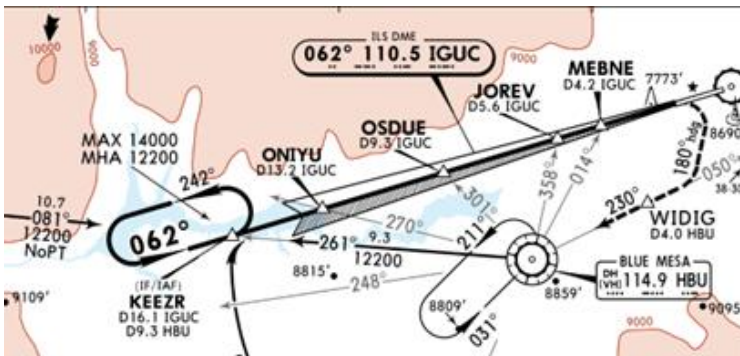
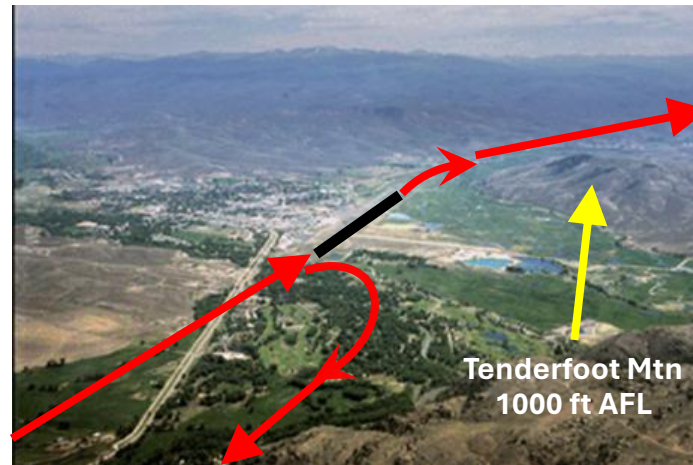
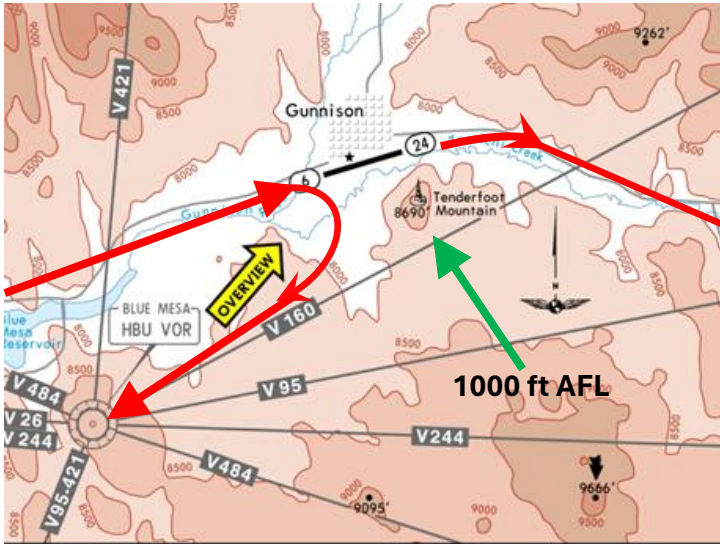
- Complex Surrounding Terrain
 - High Ceiling and Visibility Minimums
 - Schedule Integrity Challenge
 - Engine-Out Performance
- METARS Coverage



Examples of Complex Terrain

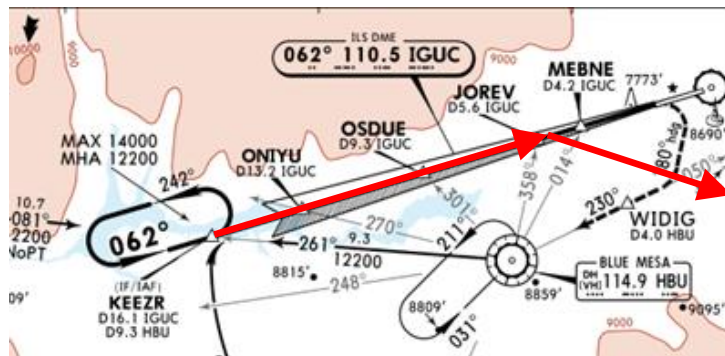
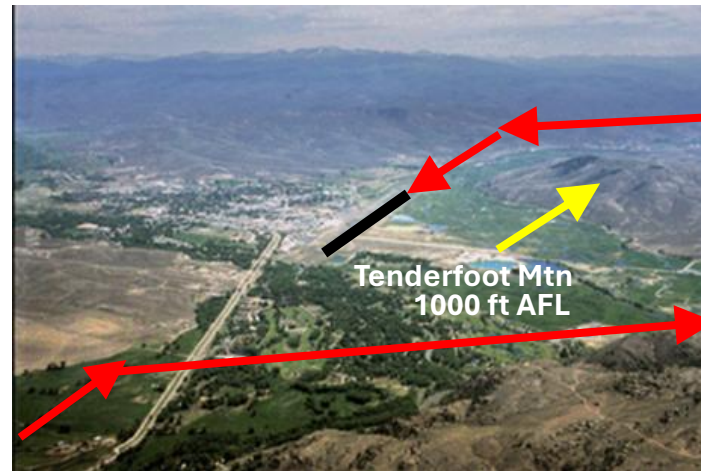
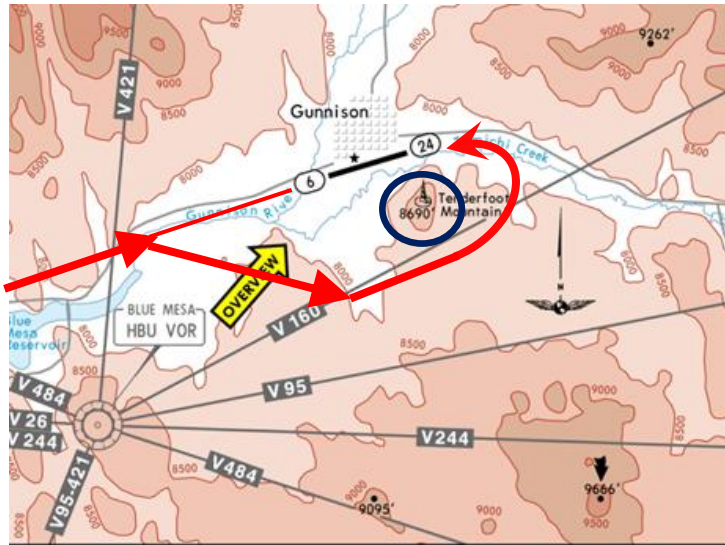
Gunnison, CO - Elevation 7680 ft MSL

- Complex Surrounding Terrain
 - Runway 06
 - High Ceiling and Visibility Minimums (1100-3)
 - Engine-Out Performance
 - RNP Missed Approach allows lower minimums (500-1½)

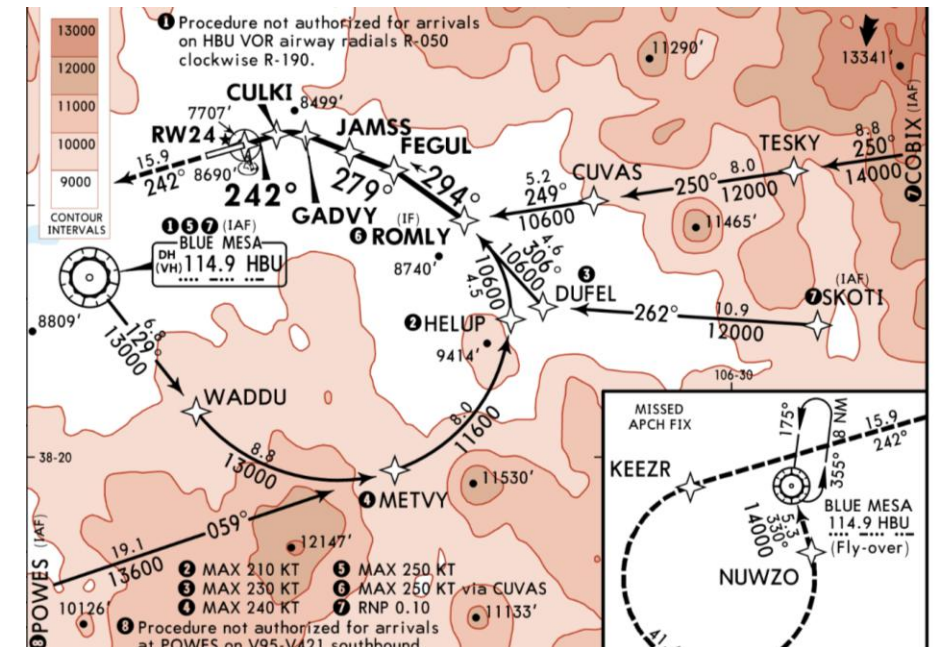


Examples of Complex Terrain

Gunnison, CO - Elevation 7680 ft MSL



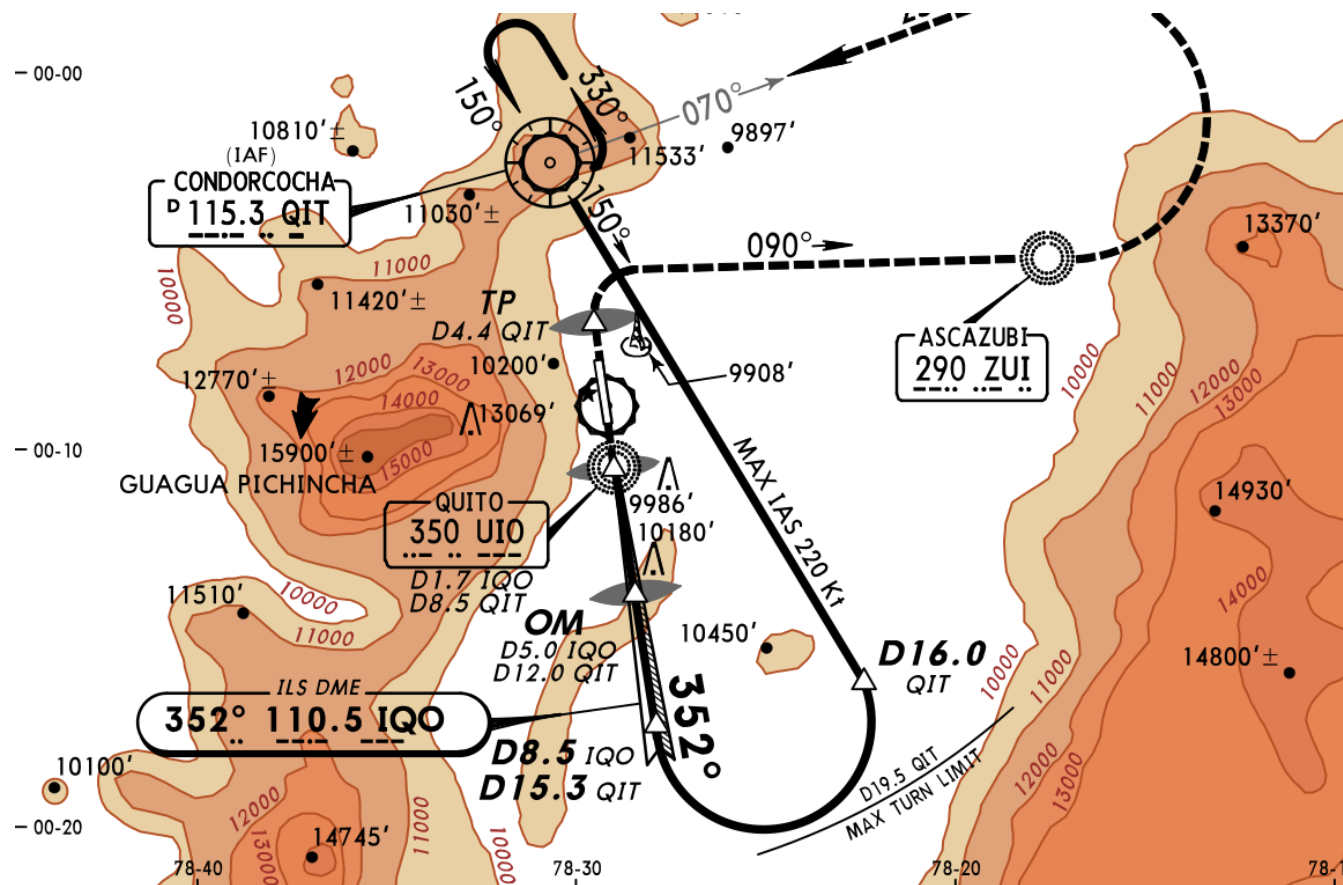
- Complex Surrounding Terrain
 - Runway 24
 - Circle to Runway 24
 - High Ceiling and Visibility Minimums (1900-3)
 - RNP Missed Approach allows lower minimums (400-1)



Examples of Complex Terrain

Add in Some Weather

Quito, Ecuador - Elevation 9228 ft MSL



- Complex Surrounding Terrain
 - Runway 35 (3.2 degrees descent)
 - High Terrain 5 NM Final (Flight Path 900 ft AGL)
 - Local Weather Effects
 - Performance Considerations
 - Next Nearest METAR 50 NM

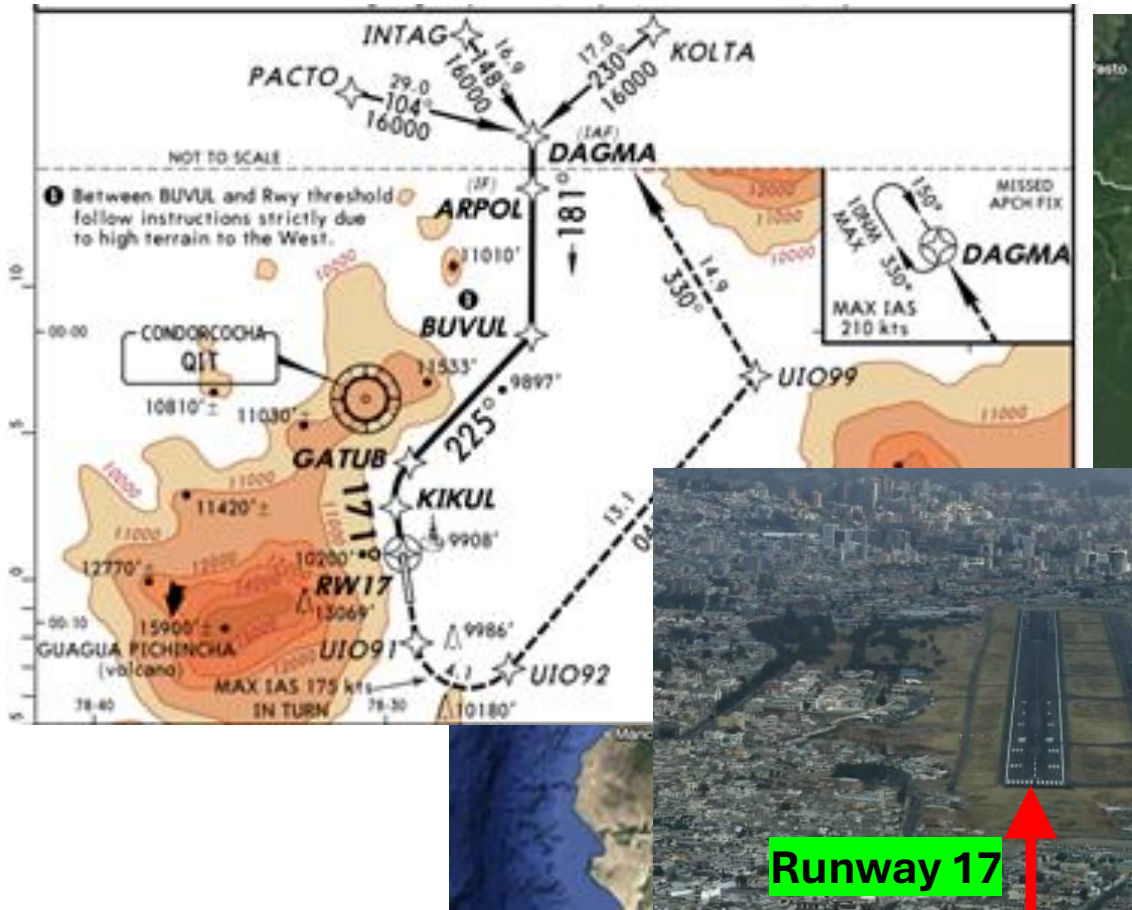




Quito, Ecuador - Elevation 9228 ft MSL

Examples of Complex Terrain Add in Some Weather

Quito, Ecuador - Elevation 9228 ft MSL

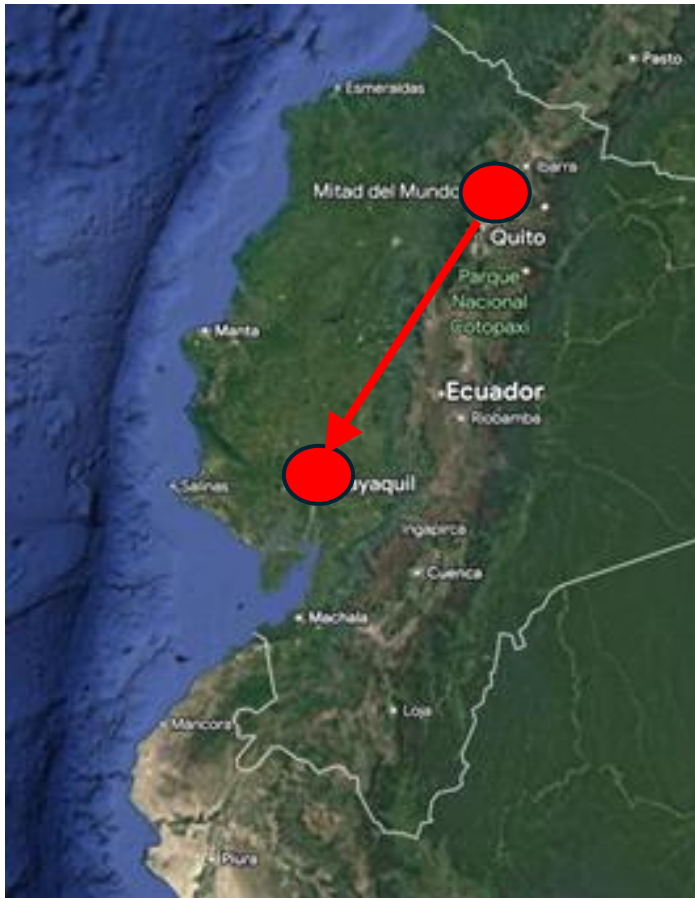


- Complex Surrounding Terrain
 - Runway 17 – Previously Visual Approach only
 - High Terrain 4.5 NM Final 2500 ft AFL
 - 15,900 ft MSL (6700 ft AFL) Volcano 5 NM West of Airport
 - Local Weather Effects
 - Performance Considerations



Examples of Complex Terrain Add in Some Weather

Quito, Ecuador - Elevation 9228 ft MSL



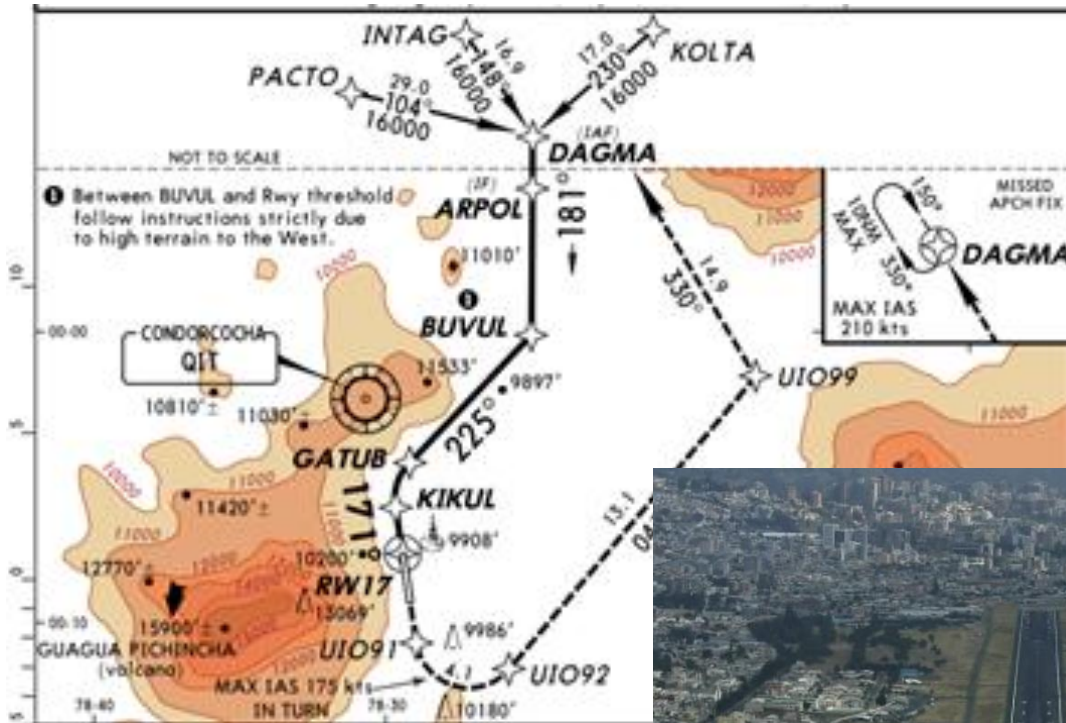
- Complex Surrounding Terrain
 - Runway 17 – Previously Visual Approach only – Now RNP Approach
 - High Terrain 4.5 NM Final 2500 ft AFL
 - South Winds with clouds required divert to Guayaqui
 - 15,900 ft MSL (6700 ft AFL) Volcano 5 NM West of Airport
 - Local Weather Effects
 - Performance Considerations



Examples of Complex Terrain

Add in Some Weather

Quito, Ecuador - Elevation 9228 ft MSL

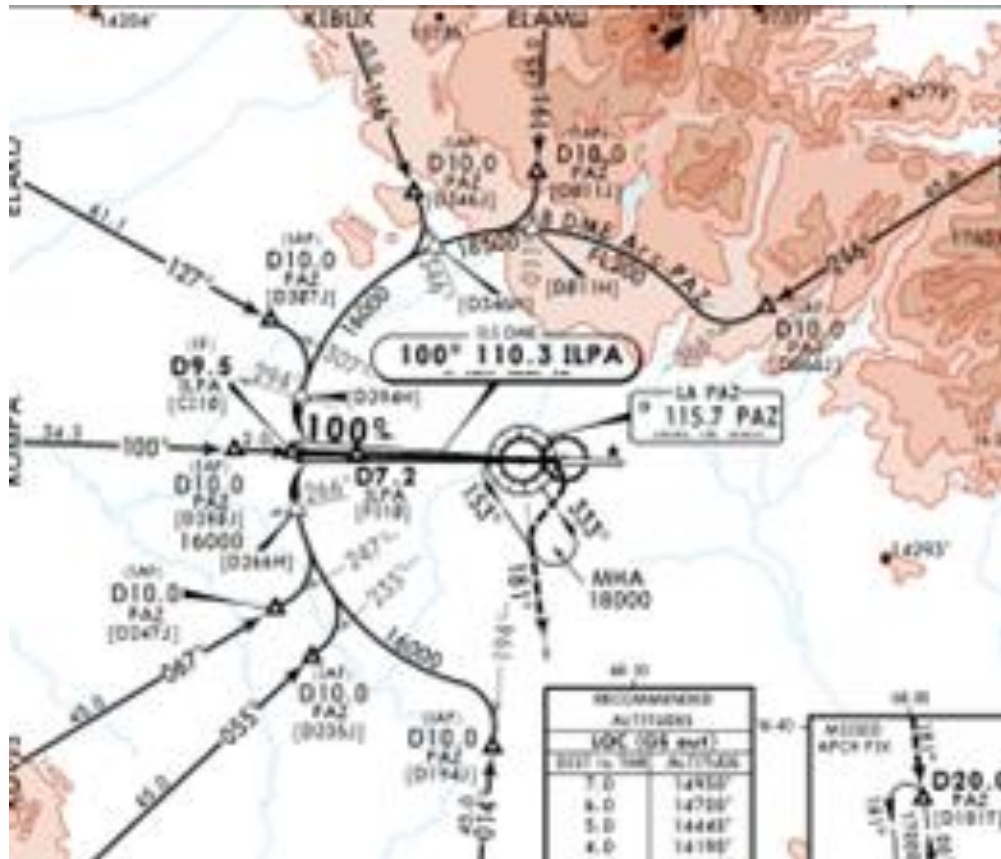


Examples of Issues without Complex Terrain

Add in Some Different Weather

La Paz, Bolivia - Elevation 13,300 ft MSL

- High Elevation
 - Landing Runway 10
 - Temperature Considerations (ISA is -12C)
 - Performance Considerations
 - Landing Weight Penalty for Ice Accretion
 - Tire Speed Limitations



RUNWAY 10



RUNWAY 28

Take Aways

- Discussion
 - Weather Information Availability
 - Rapidly Changing Conditions
 - Localized Effects
 - Winter Weather / Icing
 - Aircraft Performance
 - ATC Radar Coverage
 - Training/Special Qualifications