Date: 2021-05-20
Flight Campaign ID: P3C1
Airport, FBO ID, City: Salt Lake City International Airport (KSLC) - Salt Lake City, UT
Aircraft: N615AR

Domain: 15 (Great Basin)
Sites Flown: REDB (Red Butte)
Days left in Domain: 3

Report Author: Mitch Haynes
Lidar Operators: Mitch Haynes
Spectrometer Operators: John Adler
Pilots: Stephen Brawders, Vince Maarschalkerweerd

Flight Hours: 02:43
Hours until maintenance: 26.70
GPS Instruments: C-ZLC1, U-P088

Summary
Crew woke up to what was initially thought to be a clear sky day, however it was quickly discovered that a layer of upper level cirrus/smoke/haze was present, thick enough to prevent green collections from occurring. With only 3 days of collect and a questionable forecast, the crew decided to collect all of Red Butte (REDB) under non-green conditions.

Concerns
Midas2 disk from today’s flight (Disk set #5) failed prior to extraction on the Hotel Kit. A disk recovery software was run to recovery data, but the file structure will need to be rebuilt from what’s on the aircraft. Only data loss expected is a couple decimated las files.

Comments
Due to a strong southwesterly wind, all lines from today’s flight had to be flown from North to South.

Daily Coverage
Estimated Cloud Cover Key

<table>
<thead>
<tr>
<th>Green: 0-10%</th>
<th>Yellow: 11-50%</th>
<th>Red: &gt;50%</th>
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D15|REDB

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<tr>
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Cloud Cover: Yellow

Total number of lines flown: 19
Flight Screenshots: NIS on the left, Lidar on the right

Pictures

Above: Looking west across the Red Butte flight box. You can just barely make out the layers of cirrus/haze along the horizon, but enough to prevent “Green” data collections from occurring.
Above: Satellite view of the cirrus layer from around the same time that the photo was taken.

**Cumulative Domain Coverage**

D15|ONAQ (Onaqui-Ault)

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Flown: 100% (42/42)
Green: 76% (32/42)
Yellow: 14% (6/42)
Red: 10% (4/42)

D15|REDB (Red Butte)

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 |
|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 |

Flown: 100% (19/19)
Green: 0% (0/19)
Yellow: 100% (19/19)
Red: 0% (0/19)

**Weather Forecast**

<table>
<thead>
<tr>
<th>Fri 5/21</th>
<th>Sat 5/22</th>
<th>Sun 5/23</th>
<th>Mon 5/24</th>
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</thead>
<tbody>
<tr>
<td>PM 64° 42°F</td>
<td>PM 65° 43°F</td>
<td>PM 58° 42°F</td>
<td>PM 66° 45°F</td>
</tr>
<tr>
<td>Thunderstorms 0.09 in</td>
<td>Mostly Sunny 0.18 in</td>
<td>Scattered Thunderstorms 0.22 in</td>
<td>Mostly Sunny 0 in</td>
</tr>
</tbody>
</table>

source: wunderground.com
Flight Collection Plan for 21 May 2021

Flyority 1
Collection Area: Onaqui (ONAQ) yellow/red lines to be redone.
Flight Plan Name: D15_ONAQ_C1_P1_v3_Q780
On-station Time: 1600 UTC / 1000 L
Re-fly lines 2-10 if Green

Flyority 2
Collection Area: Red Butte (REDB)
Flight Plan Name: D15_REDB_A1_P1_v2_Q780
On-station Time: 1550 UTC / 0950 L
Re-fly entire box if Green

Flight Crew: John, Mitch