

# Tools

## Redlining added to Reckon!

### AirGon



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AirGon Reckon (“Reckon”) is our cloud hosted collaboration portal for small Unmanned Aerial System (sUAS) or “drone” mapping. It has been designed from the ground up for scalability in the cloud. Hosted in Amazon Web Services (AWS), it provides a robust platform for sharing data that requires no administration or infrastructure on the user’s part including that dreaded operation of data backups!

Reckon is designed to accommodate companies that wish to manage data for multiple sites (of course, just a single site is fine, as well!). It is suited to any of the various deployment models including owner/operator, service provider or any combination of the two extremes. Once a company has a Reckon subscription, they can easily establish a location for each of their physical project sites. A physical site might be a quarry site, a stockpile yard, a borrow pit or any other area that will be routinely monitored. In Figure 1 is depicted the physical sites associated with the Reckon test login. Thus you can imagine these as the four sites being managed by the AirGon Reckon Company. You can explore this yourself at [www.airgon.net](http://www.airgon.net).

The screenshot shows the 'Sites' page in the AirGon Reckon interface. At the top is a navigation bar with 'AirGon Reckon', 'Home', 'Sites', 'Users', 'Customize', and 'Help'. Below the navigation bar is a search box labeled 'Search...'. The main content is a table with three columns: 'NAME', 'DESCRIPTION', and 'SIZE'. Each row represents a site and includes an 'Actions' dropdown menu.

NAME ^	DESCRIPTION ⚙	SIZE ⚙	
Plant 11 - Open Pit	Hilltop, KY	2 GB	Actions ▾
Plant 2 - South Limestone	Tanner, AL	1.6 GB	Actions ▾
Plant 7 - Whites Creek	Nashville, TN	1.2 GB	Actions ▾
Plant 8 - North Huntsville	Huntsville, AL	3.1 GB	Actions ▾

Figure 1: Project sites in Reckon

Reckon allows you to store “temporal” snapshots of each physical site. These slices are accessed by the date associated with the snapshot (usually the flight date). For example, you can see that there are four snapshots for our test site “Plant 8” in Figure 2. A viewer can explore the state of a site at various times by simply selecting the desired date from the dropdown date selector.

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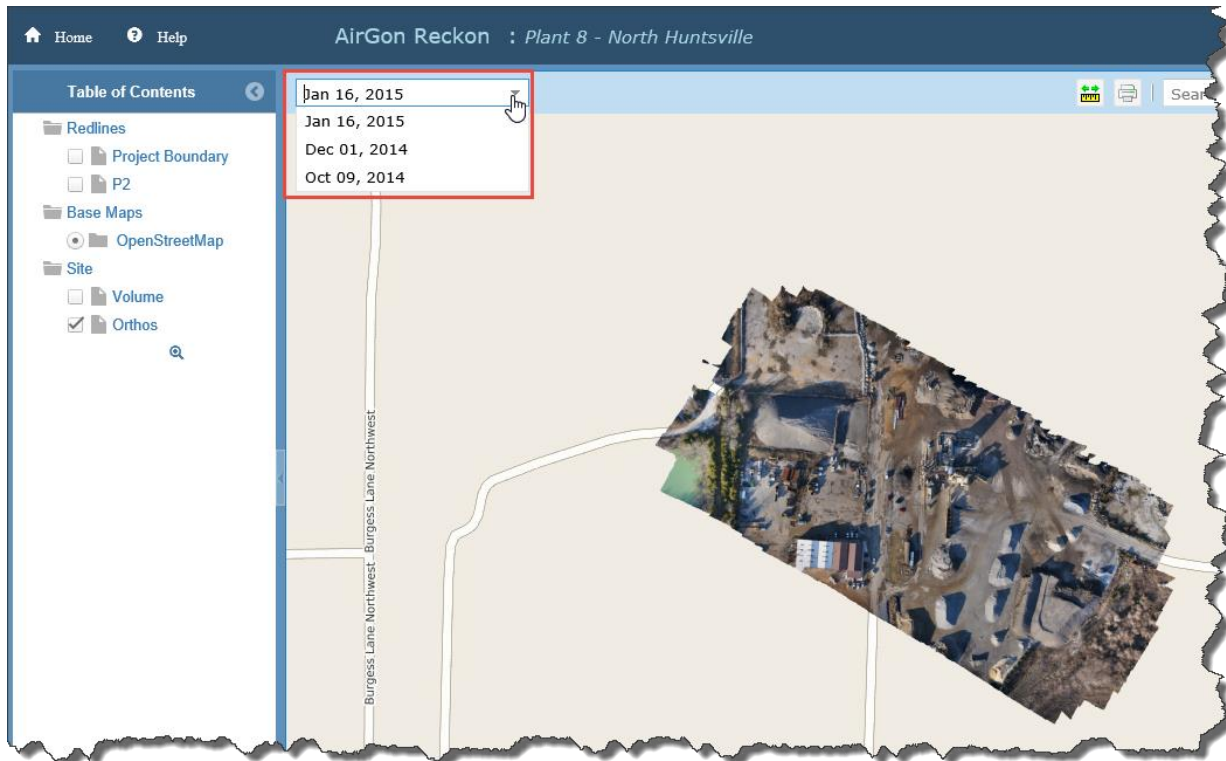


Figure 2: Snapshots of data

Reckon is intended to solve several problems associated with sharing information regarding physical sites. Among these are:

- Sharing physical site mapping data
- Backing up snapshots of data in a zero admin environment
- Providing context to data (backdrop information such as maps and satellite imagery)
- Showing snapshots of a physical site to include:
  - Orthophoto mosaic
  - Volumetric polygons
  - Volumetric metadata
  - Ground Control/Checkpoints
  - Accuracy reports
  - Other static reports and files
  - Redlines (new!)
- Generating “on-the-fly” volume reports in pdf format

The Reckon client runs in a web browser so sites can be viewed and marked (see below) using PC browsers, tablets such as an iPad or even a smart phone.

# Redlining added to Reckon!

We have just recently added a beta version of “redlining” to Reckon. This new capability allows a user to perform markups on a site to communicate information between other members of the site owner company or between the site owner and a service provider. One of its really useful (and cool!) features is the ability to associate lines of an Excel® spreadsheet to a markup on the site.

While the redlining is a rich experience with many possible uses, I want to discuss one particular “use case” that we frequently encounter. This is the case of a stockpile yard customer who has pile information only in an Excel® spreadsheet but wants to communicate pile identification information to a service provider. This flow might go something like:

1. The stockpile yard owner communicates with the service provider regarding the physical site to be flown.
2. The service provider creates a job site in Reckon and sketches the project area as a redline.
3. The stockpile site owner reviews this project area. If something needs to change, a new redline is created by the stockpile site owner.
4. The service provider flies the site and immediately posts the orthophoto mosaic to the Reckon site.
5. The stockpile yard owner imports her historic volume data from an Excel® spreadsheet (in comma separated value, CSV, format) into Reckon.
6. She clicks on the first row of the imported sheet and clicks the associated pile in the Reckon ortho view.
7. The table in Reckon automatically advances to the next row. She clicks on the pile associated with this row. This process continues until all piles have been “tagged.”
8. All of the metadata in the Excel® sheet is automatically uploaded to Reckon. The service provider can simply download these data (again, from Reckon) in Shape format and use it as the basis of the stockpile collection project. All information such as stockpile ID, material type, density and so forth is already entered as a byproduct of the stockpile owner tagging piles.
9. The service provider then uploads the final volume “toes” and metadata to the Reckon site for review by the customer.
10. The customer can now review the final products and download an automatically generated volume report from Reckon. Any necessary changes can again be communicated via a redline.

An example of this “tagging” activity is shown in Figure 3.

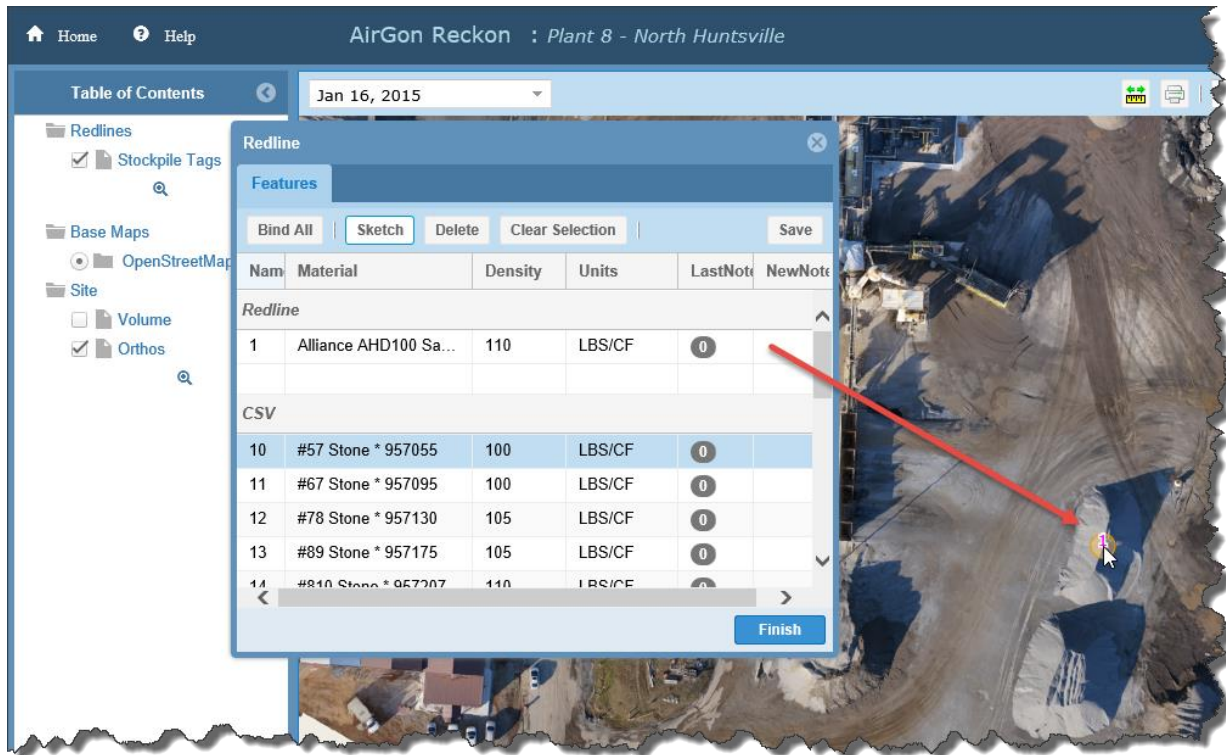


Figure 3: Tagging Stockpiles

Of course, our new redlining tools can be used for many other purposes. The uses, like most good tools, will be stretched to the limits of our user’s imaginations.

I am really quite pleased with our progress with the Reckon system. Through our own AirGon Production Services group, we have created many Reckon sites and use it to routinely communicate with our customers. Of course, our owner/operator customers (those who fly their own drones and do collections) as well as service providers also use Reckon on a daily basis. All of this true production activity gives us first hand feedback on what works, what does not work and what needs to be added.

Make sure to contact us at [info@airgon.com](mailto:info@airgon.com) for information on Reckon. Of course, you can play with it yourself by visiting [www.airgon.net](http://www.airgon.net) and selecting the “Test Drive” tab.