



SIGHT GLASS FLIGHTS

SOARS HIGH

by Phyllis Webster

What does the water treatment plant, a limestone mine and Granbury Square have in common? They have all been photographed from high above by the drone pilots at Sight Glass Flights, LLC.

Since the launch of their Granbury-based business in September 2015, partners Amber Ross and Cody Trahern have provided clients in Texas, Louisiana and Oklahoma with a vast array of aerial imaging, inspection, photography, video and mapping services. While they specialize in industrial solutions, their professional skills coupled with their state-of-the-art equipment allow Ross and Trahern to meet the diverse needs of clients, such as The City of Granbury, utility companies, oil and gas firms and area ranchers.

For example, Sight Glass Flights is documenting the Granbury Square improvement project and construction of the City's new water treatment plant. "For these projects, we do construction progression photography," says Ross. "We take photos every three weeks from the same coordinates. This technology enables City leaders to document the construction progress and have up-to-date images for construction managers and board or bond meetings."

On another local project, Sight Glass Flights utilized thermal imaging technology to identify hot spots in a flyover of a large structure fire. Says Ross, "Fire departments have thermal cameras, but in a case like this, it is safer for us to fly over a two-

story structure than for firemen to attempt the same imaging from ground level."

Some of the many industrial applications include pipeline leak detection, thermal roof inspections, structural integrity assessment, offshore installation review, cooling tower inspections, crop status surveys, topographic and drainage evaluation, lake and land surveys, and aggregate volumetrics (size and volume measurements). The company also performs wildlife surveys, which are required of landowners to maintain Texas Parks and Wildlife exemptions.

The company's versatile commercial drones and unmanned aerial systems (UAS) are engineered with the highest imaging technology available, but it is the skill of the drone pilots together with their application specific software that allows for the collection of valuable, actionable data. As Federal Aviation Administration (FAA) certified pilots, the Sight Glass Flights crew operates and maintains compliance with all FAA regulations, which includes being licensed to pilot. They are also certified (OGI & FLIR) optical gas and thermal imaging experts.

According to Ross, in August 2016 FAA regulations changed to create a specific UAS pilot's license. "This license is required to operate a drone commercially. The licensing exam requires a great deal of study and knowledge in aeronautics."

With the precise calculations afforded by their software, many flights are pre-programmed before launch. For example,

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when industrial mapping is performed at a mining operation, they set the “mission”, tell the drone where to fly and what it is to capture. A mapping/modeling program “stitches” overlapping images and provides elevation data to calculate volumetrics. Elevation is colorfully expressed on-screen.

Ross, who has a master’s degree in public accounting from Texas A&M University, recently wrote the UAS curriculum for Tarrant County Junior College and is a guest speaker at the Lockheed Martin ground school for interns. She enjoys being based at Granbury’s airport where their team can easily collaborate with FAA professionals.

Both Ross and Trahern attended Granbury schools, but left to further their careers. Trahern served in the Marines, and then later worked in oilfield services. Ross went to Houston to work for a nationally-known accounting firm. She worked in project management and then risk management for a global resources company. Her work involved extensive travel, offshore and international.

“I needed a drastic change of pace after my two children were born,” says Ross. “So, my husband Walker and I moved to Granbury, where we bought and restored a historic home, which was on the Candlelight Tour of Homes. I soon ran into my friend Cody, who had a commercial drone.” They then pooled their considerable talents to launch Sight Glass Flights.

“As a former risk manager, I believe this business is all about safety, accuracy and efficiency,” says Ross who explained that falling from heights claims too many lives in the oil and gas industry. Animal biologists, who traditionally fly low in helicopters to do wildlife surveys, have a high fatality rate as well. “To measure aggregates in mining operations, people had to walk around mountainous piles of rock, for example, to measure and estimate volume. With drones, all these functions can be done faster, with more accurate data, and above all, with much less personal risk.”

For information on Sight Glass Flights or to learn more about registering your UAS drone/ obtaining a remote pilot airman certificate for commercial use, call 817-659-5980 or email info@sightglassflights.com.

A Word About Drone Safety

The FAA has precise rules about drone operation. Commercial operators and hobbyists must register all aircraft weighing .55 pounds with the FAA. To fly an UAS for commercial purposes, a remote pilot airman

certificate must be obtained and operational rules must be followed.

What constitutes commercial use? 1) Selling photos or videos taken from a UAS, 2) Using UAS to provide contract services, such as industrial inspection, mapping or land surveys, 3) Using UAS to provide professional services, such as real estate, weddings, marketing or cinema, and/or 4) Using UAS to monitor the progress of work a company is performing.

Drones have potential to cause serious harm/death if not operated safely, especially if they interfere or collide with manned aircraft. Adhere to the following safety guidelines:

- Keep the aircraft in sight (visual line of sight).
- Fly under 400 feet and in Class G airspace.
- Fly at or below 100 mph.
- Yield right of way to manned aircraft.
- Do not intentionally fly over unprotected persons or moving vehicles.
- Do not fly near or over sensitive infrastructure or property, such as power stations, water treatment facilities, correctional facilities.
- Do not conduct surveillance or photograph people in an area where there is an expectation of privacy without the individuals’ permission.