

DOI/BLM Call When Needed UAS Contract Activation Summary for Silent Falcon – July 5-16, 2019

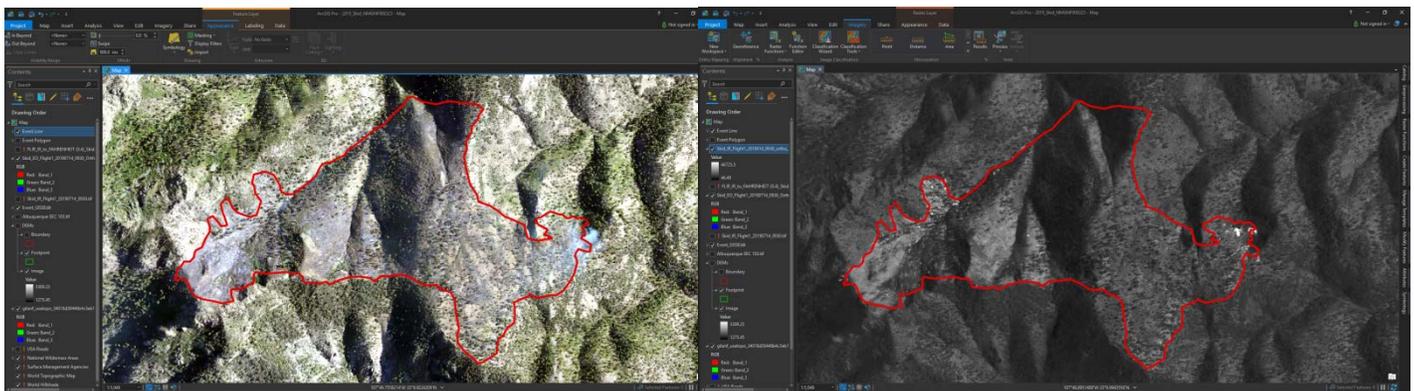
Silent Falcon was mobilized on 7/5/19 to the Miller Fire in southern Arizona and reassigned to the Skid Fire in New Mexico on 7/12. This is the first CWN activation of the 2019 fire season. Federal UAS Manager and Data Specialist positions were filled and trainee positions were authorized by the requesting unit. The Miller fire was managed by a Type 2 IMT (Swope). Silent Falcon was utilized for perimeter mapping, infrared detection, and situational awareness. 12 flights were conducted for a total of 9.5 hours of flight time.



Silent Falcon Takeoff (Gila NF)

The Gila National Forest requested UAS services for the Skid Fire to mitigate the hazards associated with ground personnel working in steep, rocky, and lightning prone terrain within the Aldo Leopold Wilderness. The UAS crew set up a UAS launch and recovery zone in relative safety and monitored the incident with the aircraft. Data products included fire progression maps, video, and infrared perimeter interpretation. 7 flights were conducted for a total of 6.5 hours of flight time.

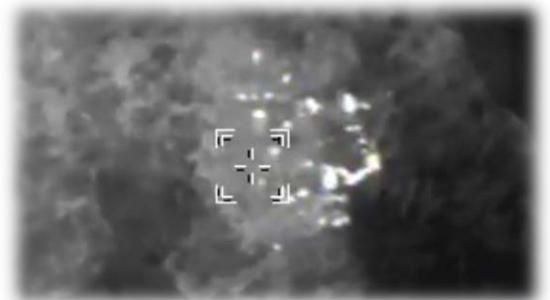
A new mapping camera was utilized throughout the activation. A FLIR Duo Pro fixed to the nadir position captured electro-optical (EO/daylight) and infrared (IR) imagery. This enabled Data Specialists to generate EO and Infrared orthomosaics using specialized image stitching software (Agisoft Metashape). Incident specific data (e.g. fire perimeters) were then derived from the orthomosaics and provided as deliverables.



Skid Fire natural color orthomosaic

Skid Fire infrared orthomosaic

While assigned to the Skid fire, lightning ignited another fire in the wilderness area. The UAS crew was able to fly 10 miles from the ground station, find the fire and relay a size up (location, size, fire behavior, etc.) to fire management personnel. Lessons learned during this activation will be documented and applied to future assignments.



IR image of lightning caused fire in the Aldo Leopold Wilderness