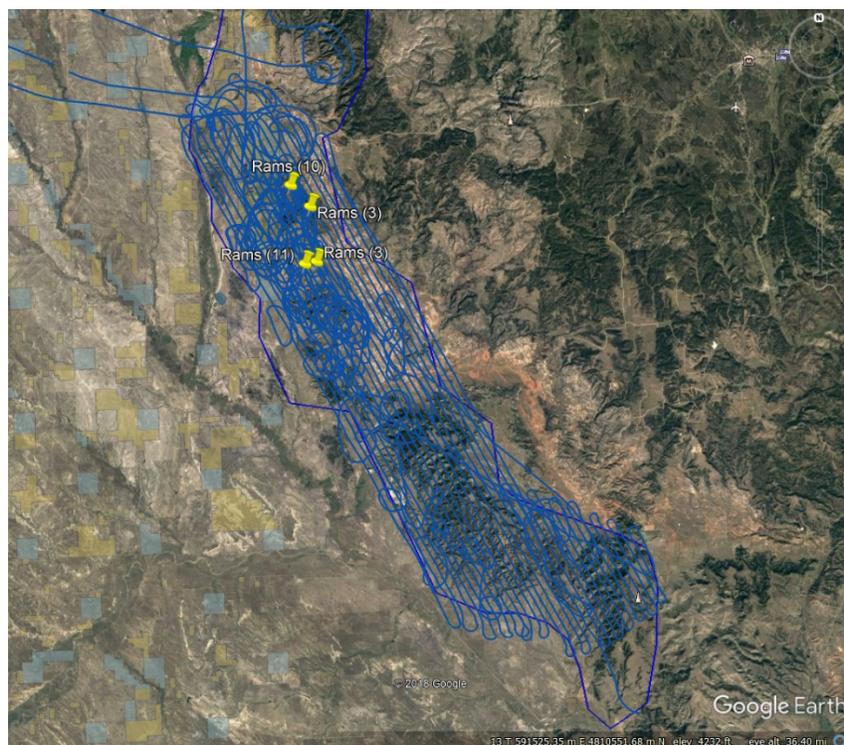


The Wyoming Chapter of the WSF did not grant any money for the Elk Mountain FLIR (Forward Looking Infrared) bighorn sheep survey. However, arrangements were made via WSF members to grant \$7,000 via the Wyoming Governor's Big Game License Coalition (bighorn sheep species committee) for this survey in lieu of both entities providing money for this endeavor.

The survey was designed to use infrared cameras to fly all occupied habitat within the Kouba Canyon Bighorn Sheep Herd Unit, which includes lands in both South Dakota and Wyoming. The primary goal of this survey was to get a revised herd unit estimate via a census survey. Currently, biologists from the Wyoming Game and Fish Department (WGFD) and South Dakota Game Fish & Parks (SDGFP) jointly estimate this herd to be approximately 170 sheep, although there is a wide confidence interval surrounding this estimate. The survey was conducted in early June of 2018, with all occupied habitat being flown. Unfortunately, the survey was ineffective in locating bighorn sheep. Despite very thorough and extensive coverage of the area (see figure below), a mere total of 27 rams were detected, with no ewes or lambs being observed. However, both immediately prior to and after the survey, numerous ewes and lambs were observed via ground counts by WGFD personnel. In all likelihood, the primary reason such few sheep were detected was likely due to them being in conifer cover at the time of the survey.



The vendor, Owyhee Air Research Inc., has demonstrated excellent success in utilizing FLIR surveys for bighorn sheep in Idaho. Due to the relatively small size of this herd unit, coupled with the fact that much of the occupied habitat is open without conifer cover, managers felt this herd unit would be a prime candidate for use of the FLIR technique. However, this technique was clearly ineffective for this herd unit, at least during the timeframe in which this survey was conducted. In addition, mature ewes were still largely covered in their winter coats (only heads and necks had summer coats coming in) during ground surveys in late May. This may have also

inhibited the FLIR camera's ability to detect head signatures from these sheep. FLIR surveys for bighorn sheep have been effective in some areas, although managers should be cautious about utilizing this technique in areas where sheep may occur in conifer cover at time of survey.

A total of \$22,984.50 was spent conducting this survey, of which \$7,000 came from the WGBGLC, \$3,000 came from the Casper Region WGFD flight budget, with the remainder coming from South Dakota via the local WSF chapter and the SDGFP budget.