1.0 CASPER MOUNTAIN

1.1 Area Description

Number of Points: 91
Number of Structures: 740
BLM Ownership: 3,750 acres (16 parcels)

Casper Mountain is divided into five assessment areas, each with multiple land owners. The western side consisting of Jackson Canyon and Red Creek is considered bald eagle wintering habitat and is classified as an Area of Critical Ecological Concern. Due to Casper Mountain's close proximity to the City of Casper, any mitigation efforts on the Mountain will be visible and receive a high degree of public interest.

1.2 Jackson Canyon

Named for the Fremont Expedition photographer, Henry Jackson, the steep anticline area faces southwest into Jackson Creek and north towards Highway 220 and the Goose Egg area. The area is approximately 70 % ponderosa pine (*Pinus ponderosa*) with Rocky Mountain juniper (*Juniperus scopulorum*) and limber pine (*Pinus flexilis*) as minor components. Thirty percent of the area is sagebrush interspersed between the drainages. About fifty-seven percent of the shrub plots are being encroached by pine. This encroachment is due to successful fire suppression over the last century. There are a few old ponderosa pines on the south slopes, which indicates a mid-succession stage of stand development. Evidence suggests that historically the area was predominantly sagebrush with a few scattered pines. Opportunities for fuel treatments exist on both aspects, but primarily on the southwest side near Jackson Creek.

1.2.1 Management Recommendations

1. *Pile and Burn*. Pre-treat areas for future broadcast burns by piling and burning any large concentrations of fuel near containment lines or areas of concern. Some post fire areas have high concentrations of 100- and 1000-hr fuels which could be pile burned as well.

2. *Broadcast Burn*. Utilize cliff faces, roads, ridgelines, and previous fires to burn-out from (or into) when establishing containment lines and boundaries for prescribed fire areas. Burning sage-pine areas will reduce the pine understory, break-up the surface fuel, reduce surface fuel loads, and encourage native grass species such as bluebunch wheatgrass (*Pseudoeregneria spicatum*) and Idaho fescue (*Festuca idahoensis*). Expand meadows with smaller, less intense prescribed burns by burning the adjoining sagebrush and pine overstory.

3. *Cheatgrass Management*. Cheatgrass (*Bromus tectorum*) is present in small areas on the southwest slopes. Management of this area with early season grazing or displacement with immigrant forage kochia (*Kochia prostrata*) may be possible.

4. *Public Outreach and Education*. Although most fuel treatment projects will focus on the southwest side of Jackson Canyon, the effects of these treatments (e.g., smoke) will be noticed by residents of Goose Egg and the Gothberg additions. Residents in these areas need to be educated on prevention, defensible space, the condition of the vegetation and fuels in the Jackson area, and the benefits of prescribed fire. Most of the immediate treatment opportunities are found on south facing slopes.

1.3 Webb Creek

The Webb Creek area consists primarily of north facing grass and sagebrush flats rising to steep slopes on ponderosa pine-limber pine ridges and draws. Aspen (*Populus tremuloides*) and chokecherry (*Prunus virginiana*) are present in the drainages. Subdivisions border the foothills to the north. The area has high scenic value and provides good forage and cover for wildlife.

1.3.1 Management Recommendations

1. *Prescribed Fire*. Spring burns should be considered to reduce fuel loading, rejuvenate the overcrowded and declining true mountain mahogany (*Cercocarpus montanus*), and encourage native grasses. Managers could utilize residual snow cover when pile burning or to limit uphill spread.

1.4 Red Creek

The Red Creek area was the site of the 800 acre 1985 Red Creek fire. As a result of the fire, dry, south-southwest slopes with fragmented ponderosa pine stands occur with ceanothus (*Ceanothus velutinus*), mountain big sagebrush (*Artemisia tridentata ssp. vaseyana)*, and grass in the understory. Heavy 1000-hr fuels are present in the burn area. Grasses and shrubs have reestablished since the fire, with limited ponderosa and limber pine encroachment. Small stands of aspen are also present. A cabin is located in a forty-acre inholding, north of Red Creek Canyon. Two other cabins are located a half-mile to the east.

1.4.1 Management Recommendations

1. *Fuel Wood*. Fuel wood permits could be issued for the area to reduce the heavy 1000-hr fuel load in the fire area.

2. *Pile burning*. Areas of higher fuel concentrations could be piled and burned in the winter to reduce the loading and improve the aesthetics of the area.

3. *Mountain Pine Beetle Management*. Mountain pine beetles (*Dendroctonus ponderosae*) are present on the east side of the area and are currently being managed by the BLM. Continued monitoring of mountain pine beetle activity is needed and "spot" treatments are recommended. Identify trees currently infected, fall and buck into manageable size, and cover with a heavy mil plastic. Another treatment with known success is to buck into two-feet sections and score sections with a one-inch wide, two-inch deep "groove" from end to end. A final recommendation is to fall infected trees in the winter, pile and burn on site.

1.5 Beartrap-Hogadon

Beartrap-Hogadon constitutes the center of Casper Mountain and is the main corridor for travel. It has a year-round population of approximately 250 residents and has high recreational use. BLM holdings are small (5- to 80-acre blocks) and are dispersed among private ownership. A Remote Automatic Weather Station is located near point 80.

1.5.1 Management Recommendations

1. *Collaborative Treatment Strategy*. Due to the limited and fragmented nature of the BLM lands and multiple land ownership, effective treatment of the area will not be achieved without partnerships with the City, County, State, and private parties. A detailed treatment strategy needs to be developed and presented to all parties before management recommendations can be implemented.

2. *Public Outreach and Education*. It is recommended that a public meeting be held to inform homeowners of the dangers associated with living in a wildland-urban interface.

Homeowners should be provided with recommendations to mitigate the fire hazard. These mitigation measures could be developed from the literature and possibly collaborative agency assessments conducted at each residence.

3. *Aspen Regeneration*. Existing aspen stands should be targeted with low intensity surface fires to kill encroaching pine and fir and expand existing groves. When burning these sites, natural barriers (e.g., rock outcrops, cliff faces), game trails, roads, hiking trails, snow concentrations, could be used as fire breaks. Expanding aspen areas enhance wildlife habitat, aids in water and soil stabilization, and creates natural fuel breaks to modify the spread and intensity of upslope crown fires. Another recommendation is to mechanically thin from below all conifers within and surrounding the stand and either "lop and scatter" slash or "windrow" slash around the stand. This will aid in mitigating against the browsing of aspen shoots by livestock and big game.

4. *Prescribed Fire*. After adequate public education and support, pile and burn areas to reduce the surface fuel load. Limb ladder fuels surrounding structures and remove surface and aerial fuels next to homes. Broadcast burn employing a series of low intensity fires utilizing roads, trails, and previous fires as temporary fuel breaks. Prioritize areas based on ease of burning (e.g., minimal site prep, ample fire breaks), greatest likelihood of success, possible impacts to structures or public (e.g., escape fire, smoke), occurrence of aspen, condition and composition of the understory, etc.

5. *Land Consolidation.* The scattered, small BLM tracts are best sold (e.g., Girl Scout Camp, City of Casper) or swapped to consolidate ownership.

1.6 East End

There are 80- and 160-acre blocks at the terminating end of East End Road, as well as an 80-acre block on the far southeast side of the mountain, which is accessed from Hat Six Road. There are 4 to 5 structures between the Ponderosa Lateral Road and the BLM holdings. The Hat Six block has several cabins within a half-mile to the south over a hogback ridge and on the west side of the road. Plots 83 and 88 are in thick ponderosa and lodgepole pine (*Pinus contorta*). Plots #89 and #90 are isolated in a steep canyon

with difficult access. There is an overmature and sizable riparian community in the bottom of the drainage.

1.6.1 Management Recommendations

1. *Thinning*. The lodgepole pine stand in the Hat Six block could be commercially thinned to reduce the fuel load. Thinning slash will increase ground fire intensity for the first few years but should decrease this risk as fuels lose needles and decompose. Piling slash in openings would reduce surface fuel continuity.

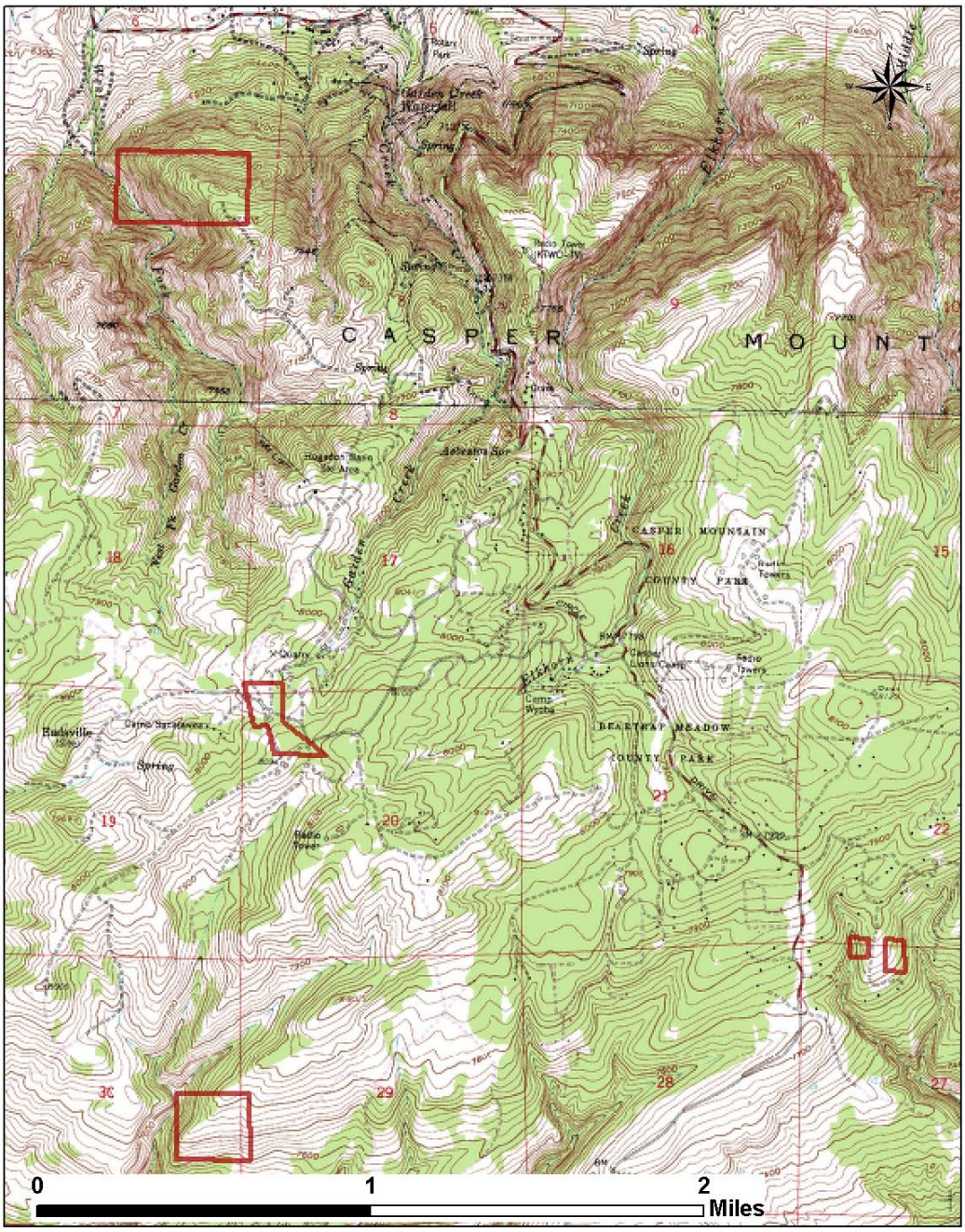
2. *Broadcast Burn*. Consider burning the area around plots 89 and 90. A low to moderate intensity surface fire utilizing an October snow will revitalize the aging habitat.

1.7 Casper Mountain Hazard Assessment Rating

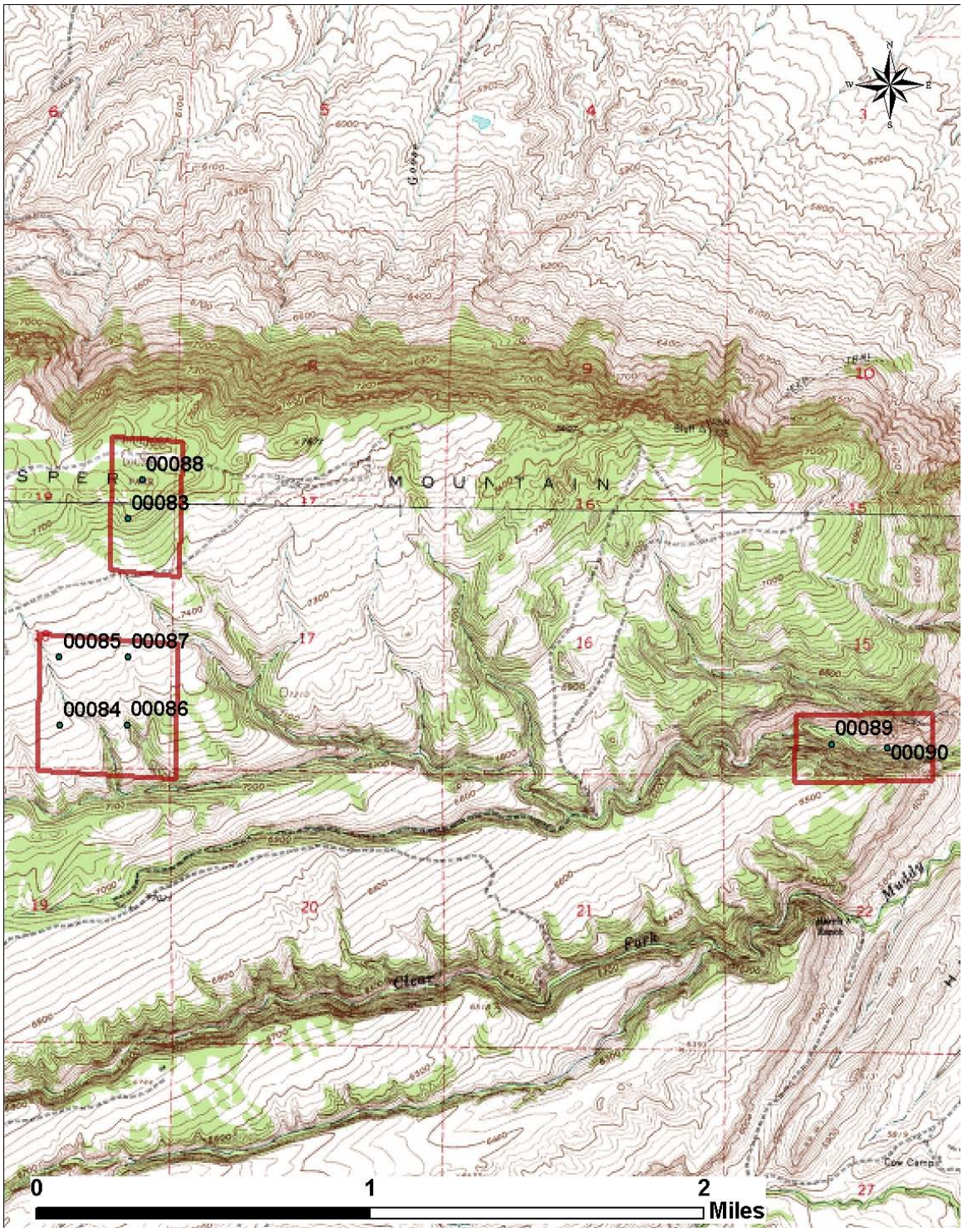
Total Rating Score	Hazard Level	Amount (%)
1-14	Low	14
15-21	Moderate	65
21-28	High	20
29-35	Extreme	1

1.8 Casper Mountain Maps

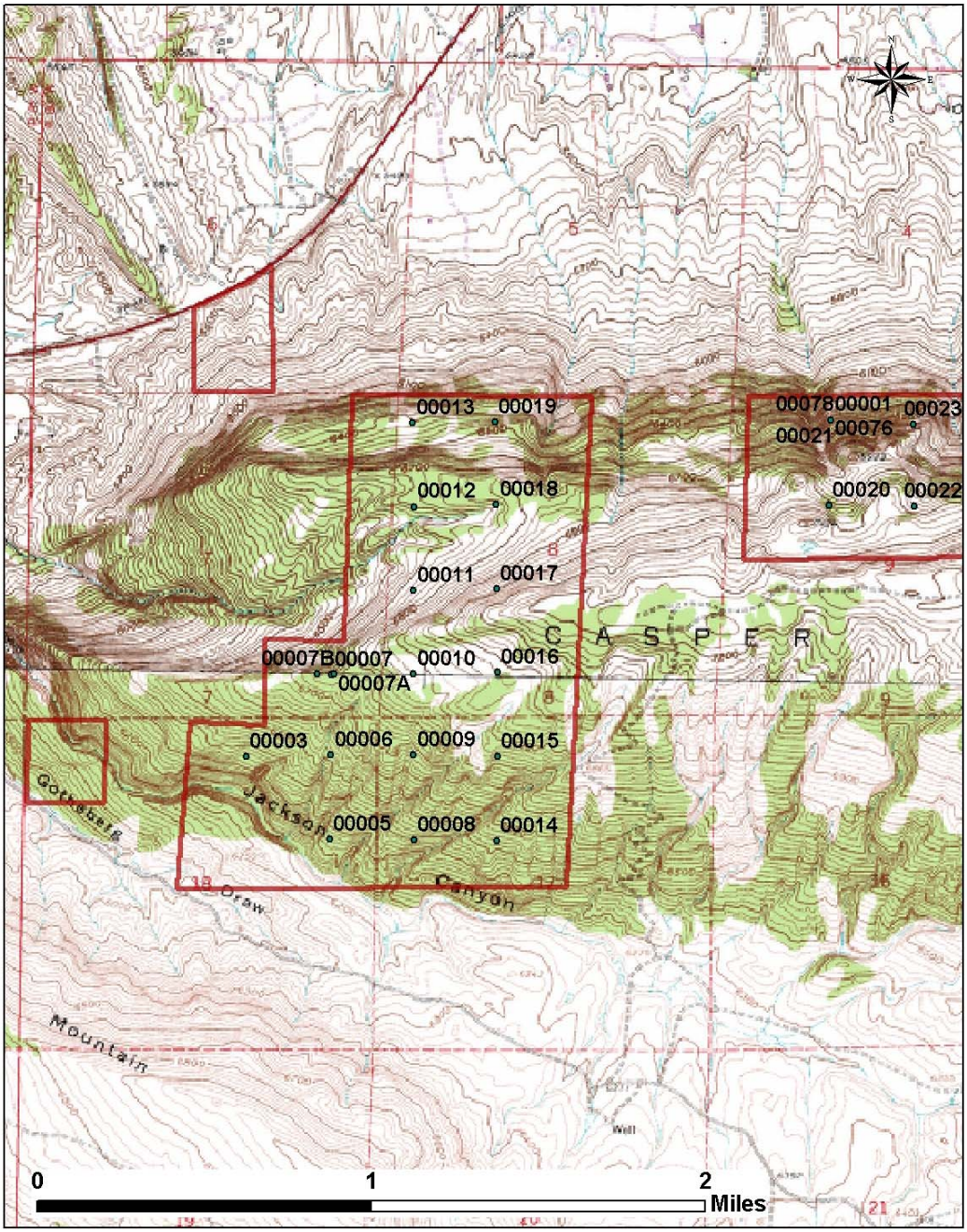
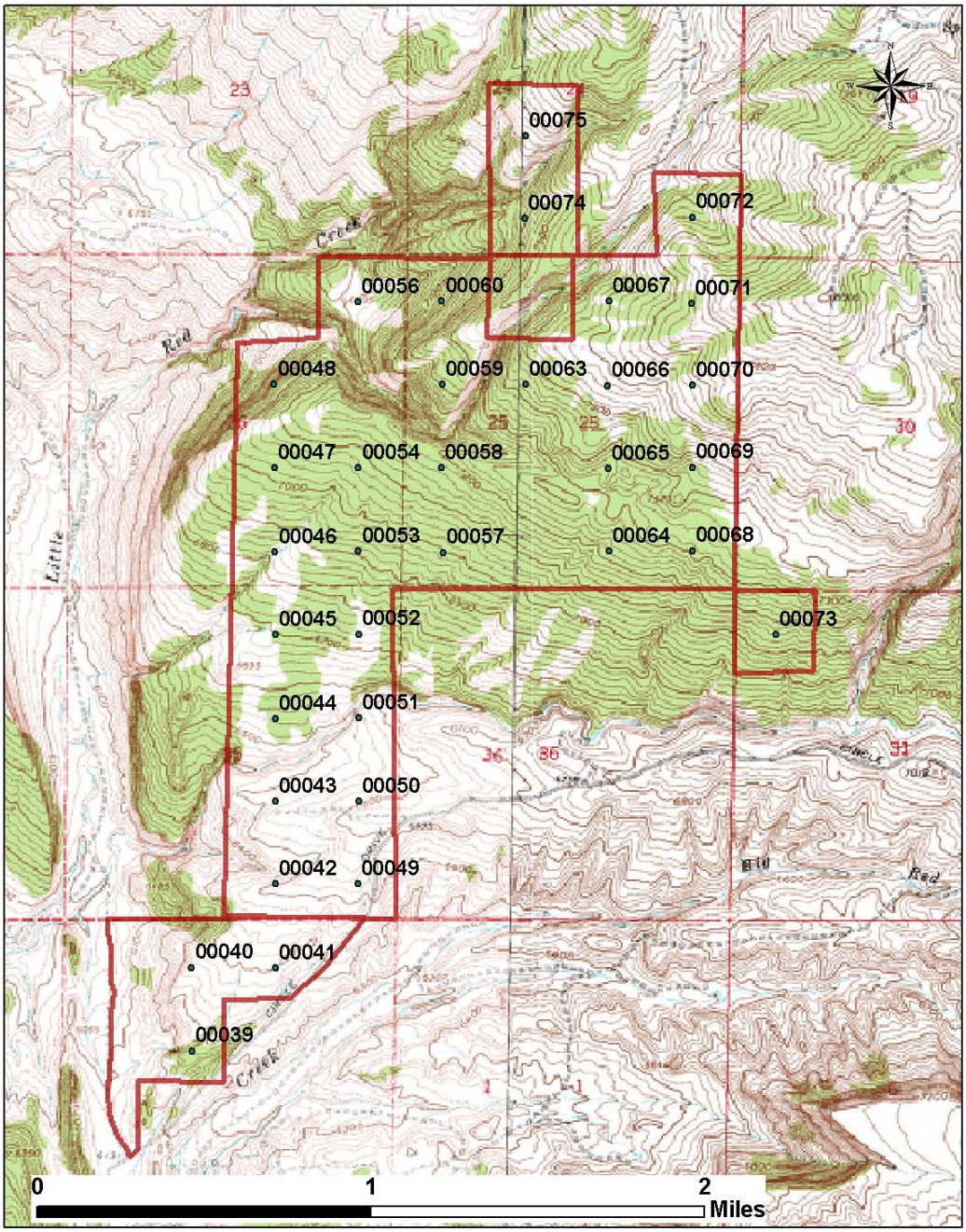
CASPER MOUNTAIN - CENTRAL



CASPER MOUNTAIN – EAST



CASPER MOUNTAIN - FAR WEST



CASPER MOUNTAIN - WEST