



United States Department of the Interior

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*Battle Mtn. Dist
Callaghan
HMA*

3/19/08

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TO: Battle Mountain Field Office, Wild Horse and Burro Census Files
FROM: Shawna Richardson, Wild Horse and Burro Specialist
SUBJECT: March 2008 Census of the Callaghan HMA.
DATE: March 19, 2008

March 8-9, 2008, a census flight was completed of the Callaghan HMA, as part of the flight of the Callaghan Complex.

Company: El Aero
Pilot: Ted McBride
Participants:

Shawna Richardson
Jason Spence, Jason Theodozio

Wild horse locations were identified on 1:100,000 maps and entered into the on-board "Ag-Nav" GIS system operated by the pilot. For each wild horse location observed, a waypoint was entered by the pilot which corresponded to the number of adults and foals recorded by one of the observers. The Ag Nav data was downloaded by Battle Mountain FO staff and utilized to compile final census data and maps.

A grid pattern was used for the majority of the census. The pattern was adjusted as necessary to account for topography, wild horse locations, and environmental conditions. In most cases, the grid was 1/2-1 mile wide. Observations pertaining to band size, ages, and colors were recorded, and this information utilized to ensure that double counting of bands did not occur. The helicopter maintained an altitude of 25-75' above ground level for most of the census. Maneuverability of the helicopter allowed numerous or large groups to be re-counted if necessary for accuracy.

The Callaghan HMA was completed in 9.3 hours, which included ferry time back and forth to the Battle Mountain Airport of about 25 minutes one way. The flight of the Complex was scheduled over a weekend to minimize conflicts with the MOAs.

The following table displays the dates, areas flown and flight time for each day.

Date	Flight Hours	Areas Covered
March 7	6.1	Ferry from Elko, completion of Bald Mountain HMA and east portion of the South Shoshone HMA
March 8	2.6	Begin Callaghan HMA. Weather delayed completion.
March 9	6.7	Complete Callaghan HMA
March 10	6.2	Complete Rocky Hills and Simpson Park Mountains. Return ferry to Elko.

Census Totals – Callaghan Complex

Callaghan Complex Census - March 2008											
HMA	Allotment	Inside HMA			Outside HMA			Total			Foal %
		Adult	Foal	Total	Adult	Foal	Total	Adult	Foal	Total	
Bald Mountain	Carico Lake	480	20	500	37	0	37	517	20	537	3.7%
South Shoshone	Carico Lake	41	1	42	0	0	0	41	0	41	0.0%
	Austin	12	2	14	3	0	3	15	2	17	11.8%
	Total	53	2	55	3	0	3	56	3	59	3.4%
Callaghan	Austin	296	6	302	202	7	209	498	13	511	2.5%
	Grass Valley	287	10	297	36	1	37	323	11	334	3.3%
	Simpson Park	15	1	16	See Below		0	15	1	16	6.3%
	USFS			0	11	0	11	11	0	11	0.0%
	Total	598	17	615	249	8	257	847	25	872	2.9%
Rocky Hills	JD	120	4	124	21	1	22	141	5	146	3.4%
	Grass Valley	0	0	0	0	0	0	0	0	0	
	Total	120	4	124	21	1	22	141	5	146	3.4%
Simpson Park Mountains	Grass Valley	0	0	0	9	0	9	9	0	9	0.0%
	Simpson Park	See Above		0	3	0	3	3	0	3	0.0%
	Santa Fe Ferguson	0	0	0	1	0	1	1	0	1	0.0%
	Total	0	0	0	13	0	13	13	0	13	0.0%
Grand Total, Callaghan Complex		1251	43	1294	323	9	332	1574	52	1626	3.2%

Animal Condition

Throughout the HMA, horses were noted to be moderately thin, but in acceptable condition given the population size, severity of the past winter and time of year. The horses observed on the Austin Allotment side of the HMA were noted to be in better condition than the Bald Mountain HMA horses. Numerous thin horses were observed on the Grass Valley side of the HMA. Backbone and ribs were clearly visible from the air on many of these horses. No dead horses were observed during the flight.

The low elevations in the Grass Valley Allotment were in poor condition and devoid of perennial vegetation. A large portion of the HMA was still covered in snow on this side of the HMA including the east face of Mt. Callaghan, headwaters of Skull Creek, and upper elevations between Skull and Rosebush Creeks. The overall range condition appeared to be better on the Austin Allotment side, and tufts of Sandberg Bluegrass could often be seen between shrubs on the lower elevations. Elkhorn and Cottonwood headwaters were snow covered, and snow was still present in moderate depths throughout the upper Silver Creek, Boone Creek, and Hall Creek

drainages. Throughout the HMA, wild horses were located just inside the snowline, and on the fringe at 7000-7500 feet in elevation, as well as throughout the lower elevations clear of snow. Most animals were present between 6000 and 7500 feet, with the highest elevations observed 7800 feet at the headwaters of Italian and Silver Creek.

Winter 2007/2008 was marked by heavy snowfall, which accumulated deeper in the higher elevations and farther into the lower elevations than past years. During the January 2008 gather of the Roberts Mountain HMA, deep, crusty snow resulted in the majority of the population unable to maintain acceptable body condition, and many horses were thin to very thin. Despite concerns for the health of the horses in other HMAs, body condition and health of the Callaghan HMA horses is surprisingly good at this time, and no serious death loss is apparent at this time.

Horse Color and Characteristics

Both sides of the HMA, particularly in the northern portion were characterized by many paint horses including sorrel, roan, and black and white paints. Many of the horses were vividly colored. Several palominos were noted. All foals documented during the census were newborn foals. No foals born in 2007 were documented separately.

Weather

On Saturday, March 8, gusts of 26 mph and snow flurries delayed the start of the flight until about 9:45. Due to visibility issues and the possibility of missing groups of horses in the blowing snow, the helicopter set down at the Hall Creek Ranch for about 45 minutes before resuming. Patchy weather continued, and at 12:30 the decision made to leave the census to avoid visibility issues in the rest of the HMA. The flight was resumed and completed the next day with sunny skies and clear, cool conditions.

Flight Completion

The flight began at the northwestern portion of the HMA in the Hall Creek area, and continued southward from the boundary with Bald Mountain HMA. During the first day, the area north of Hall Creek was completed and then the rolling hills outside of the HMA boundary near SR 305. A small area between Iowa and Silver Creek was completed before stopping the census due to weather. The locations of the areas covered and unlikely horse movement between them allowed the flight to end without risking accuracy problems when it continued the next day.

On March 9, the flight resumed between Hall Creek and Boone Canyon and southward along the western flank of the HMA. The higher elevations covered in snow where no tracks were visible were not flown. The southern portion of the HMA and USFS to within 1 ½ mile of Austin were flown, and the flight continued north on the east side of the HMA through the Simpson Park Allotment portion and throughout the Grass Valley Allotment portion west of the Grass Valley Ranch. At the northern boundary of the HMA, horses were crossing through gates into the Austin Allotment.

Additionally, points recorded at the far north end appear to be within the Bald Mountain HMA, though the observers were certain that the location was south of the boundary fence. In any case, the groups observed do not correspond with anything observed in the Bald Mountain HMA near this location, and the horses are likely moving back and forth anyway. It is possible that 1-2

groups observed on March 8 in lower elevations of the Austin Allotment could have been re-counted in the higher elevations on March 9.

The flight went really well, and it is felt that a high degree of accuracy was maintained due to the skill and experience of the pilot, and the abilities of the observers. Although the accuracy of the flight was good, the terrain, and sheer numbers of groups of horses observed could have resulted in horses being missed. For estimation purposes, approximately 10% could be added to the count.

Distribution

A surprisingly large number of horses were observed in the rolling hills just east of SR 305 and south of the Carico Lake Valley Road outside of the HMA boundary. The majority of horses within the HMA were congregated between Hall Creek and Iowa Canyon within the Austin Allotment, and in the Cowboy Rest/Corral Canyon area within the Grass Valley Allotment. Horses were also clustered north and south of the point located west of the Grass Valley Ranch in the vicinity of Skull and Rosebush Creeks. No horses were observed south of the Grass Valley Ranch near Callaghan Creek. Few horses were located within the HMA boundaries south of Iowa Canyon. This is probably due to the steeper elevations, and location of cross fences. The distribution of horses observed is very similar to those observed in March 2005 during the most recent census of this area.

Callaghan HMA Distribution -- March 2008									
Allotment	Area	Inside HMA		Outside HMA		Totals		Grand Total	Foil %
		Adult	Foil	Adult	Foil	Adult	Foil		
Grass Valley	N. of Cowboy Rest	111	6	31	1	138	7	145	3.3%
	S. of Cowboy Rest - northern portion of the point	106	4	0	0	106	4		
	Skull Creek - southern portion of the point	70	0	5	0	75	0		
	S. of Grass Valley Ranch	0	0	0	0	0	0		
	<i>Allotment Total</i>	<i>287</i>	<i>10</i>	<i>36</i>	<i>1</i>	<i>323</i>	<i>11</i>		
Austin	S. of Silver Creek, Elkhorn, Cottonwood	10	0	12	0	22	0	22	2.5%
	Between Silver and Boone Creek	12	1	27	0	39	1		
	Between Iowa and Boone Creek	0	0	23	0	23	0		
	Between Iowa and Hall Creek	154	3	17	1	171	4		
	N. of Hall Creek	105	2	2	0	107	2		
	Outside HMA NW	0	0	136	6	136	6		
	<i>Allotment Total</i>	<i>281</i>	<i>6</i>	<i>217</i>	<i>7</i>	<i>498</i>	<i>13</i>		
Simpson Park*	Scattered	15	1	0	0	15	1	16	0.6%
<i>HMA Total</i>		<i>583</i>	<i>17</i>	<i>253</i>	<i>8</i>	<i>836</i>	<i>25</i>	<i>861</i>	<i>2.9%</i>
USFS	Lake Flat C&H, Mountain Unit			11	0	11	0	11	0
Grand Total		583	17	264	8	847	25	872	2.9%

Refer to the Outside HMA/Simpson Park Mountains summary for information about wild horses outside of the Callaghan HMA boundary in the Grass Valley , Simpson Park and Santa Fe Ferguson Allotments.

During finalization of the census data, some points were moved to prevent overlap on the printed maps, and to ensure legibility of the numbers. The population after foaling with 17.5% increase will be approximately 995 wild horses. 18% increase would produce a total of 999 wild horses. Should 10% be added to the total observed, the estimated current population of adult horses would be 932, with 2008 post foaling populations of 1,094-1,100 wild horses.

Comparison to estimate

The 2007 estimated wild horse population of the Callaghan HMA prior to this flight was 786 total animals as is shown in the following table:

Area/Allotment	2007 estimated population	2008 Adult wild horse count	Difference
Grass Valley	347	323	+24
Austin	368	498	+130
Simpson Park	22	16	-6
USFS	49	11	-38
Total	786	847	+61

Wildlife

Groups of mule deer and Pronghorn were observed during the flight. 10 deer were located just west of the Iowa Creek Ranch, and 20 located in the rolling foothills southeast of the Carico Lake Valley Road in the Austin Allotment. 15 deer were observed in between the forks of Skull Creek in the Grass Valley Allotment. 20 pronghorn were located in the flat east of Corral Canyon.

Wildlife Sightings, March 2008			
Allotment	HMA	Pronghorn	Mule Deer
Grass Valley	Outside HMA/Steiner Creek Area	20	12
	Rocky Hills	25	
	Callaghan	20	15
Austin	Outside Callaghan	0	30
Carico Lake	South Shoshone	0	1 group
	Bald Mountain	0	80
Simpson Park	Outside HMA	5	3
Underwood	Outside HMA	2	0
Total		72	140

2008 March, Census Costs

Actual Flight Costs	7-Mar	8-Mar	9-Mar	10-Mar	Unit Total	Unit Cost	Total Cost
Flight Time	6.1	2.6	6.7	6.2	21.6	\$815/hour	\$17,604
Service Miles	173	170	193	233	769	\$1.40/mile	\$1,077
AgNav	225	225	225	225	\$900	\$225/day	\$900
Extended Pilot						\$42/hour	
Extended Truck						\$22/hour	
Per Diem	\$218	\$218	\$218		\$654	\$109/p/day	\$654
Total							\$20,235
Cost per flight hour	\$936.81						
HMA's Completed	3						
Cost per HMA	\$6745						
Cost per horse	\$12.44						
Acres flown (estimate)	986,252	45,660/hour					
Cost per acre flown	\$0.21						
Miles Flown	1437						
Cost per flight mile	\$14.08						

The March 2008 census costs were higher than would have otherwise been due to the weather problems which required a short day on March 8, and the fact that flight costs have increased again. The cost per hour is approximately 116% of what it was in March 2005.

Callaghan HMA Census March 8-9, 2008

Austin Allotment



Hall Creek Area. Blustery snow conditions caused the flight to be cut short on March 8.



North west portion of Callaghan HMA, Austin Allotment, north of Hall Creek.





Most horses on this side of the HMA appeared to be in good body condition.





Some horses appeared a little thin.

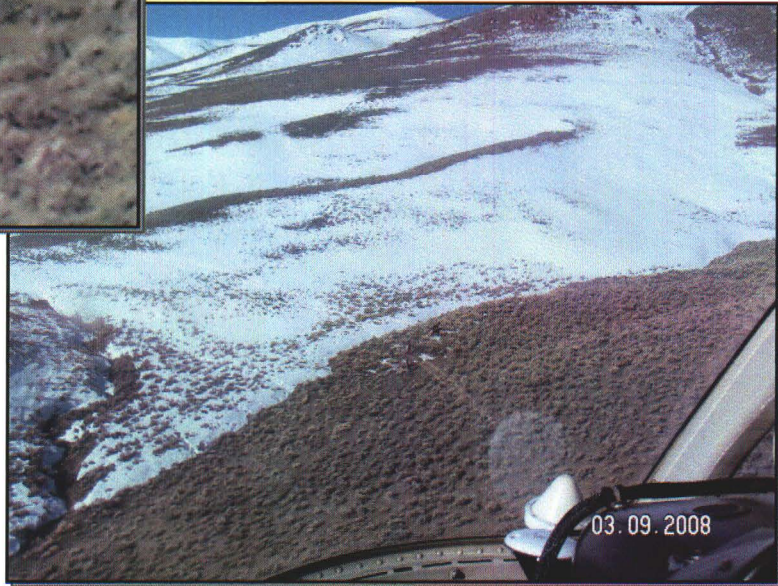


March 8, 2008. Outside of the HMA, Austin Allotment, East of SR305 in the rolling hills.



General view of terrain northern portion of Callaghan HMA, Austin Allotment



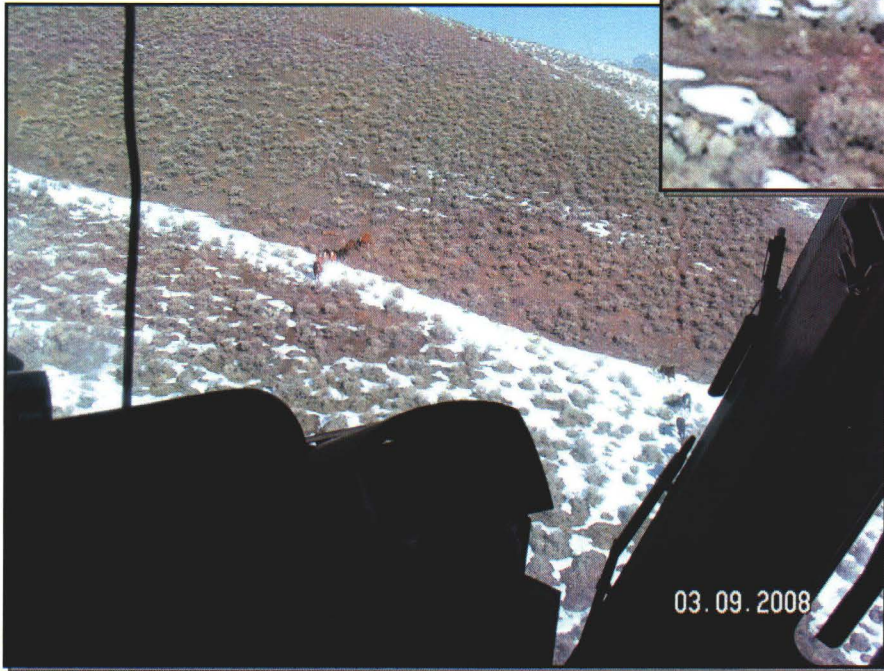


General view of terrain northern portion of Callaghan HMA, Austin Allotment





General view of terrain northern portion of Callaghan HMA, Austin Allotment



General view of terrain northern
portion of Callaghan HMA, Austin
Allotment



General view of terrain northern portion of Callaghan HMA, Austin Allotment



Austin Allotment portion of HMA, northern end.



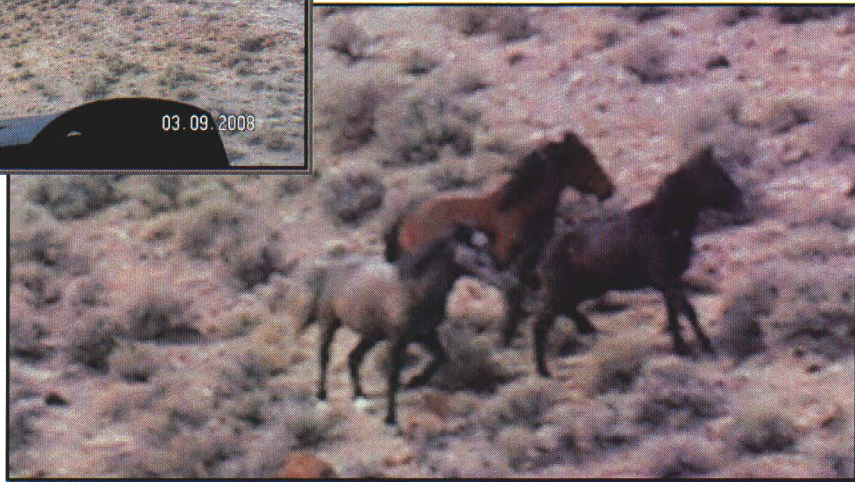
Grass Valley portion of HMA





Grass Valley portion of HMA – Central, Skull Creek/Rosebush areas





Grass Valley portion of HMA – Central, Skull Creek/Rosebush areas





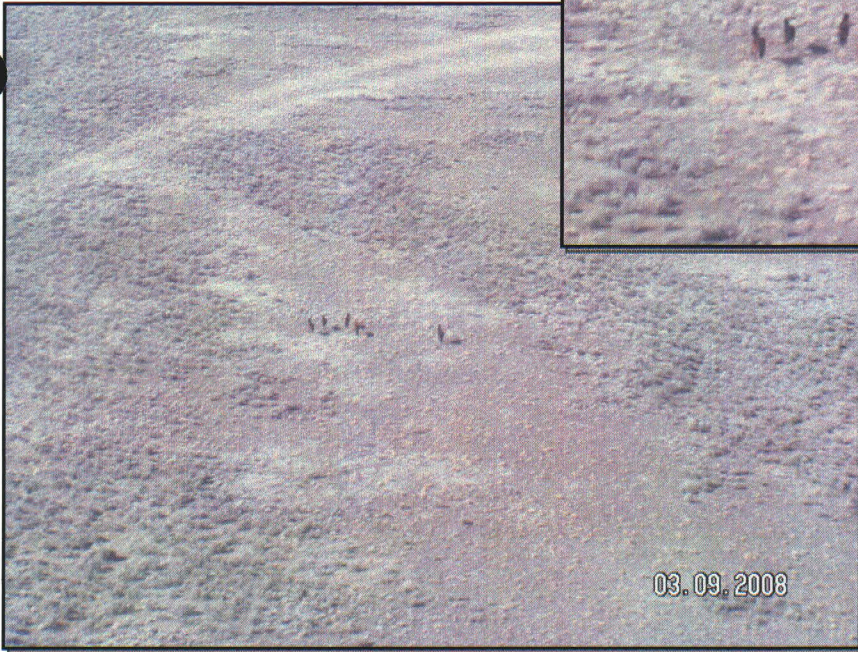
Grass Valley portion of HMA – Central, Skull
Creek/Rosebush areas

Horses on this side of the HMA were thinner than those
located on the Austin side of the HMA and thinner than Bald
Mountain HMA horses.





Many of the horses observed on the Grass Valley side of the Callaghan HMA had back bone, ribs and hip bones visible from the air. Many had an overall 'gaunt' appearance.



Northern portion of HMA, Grass Valley Allotment

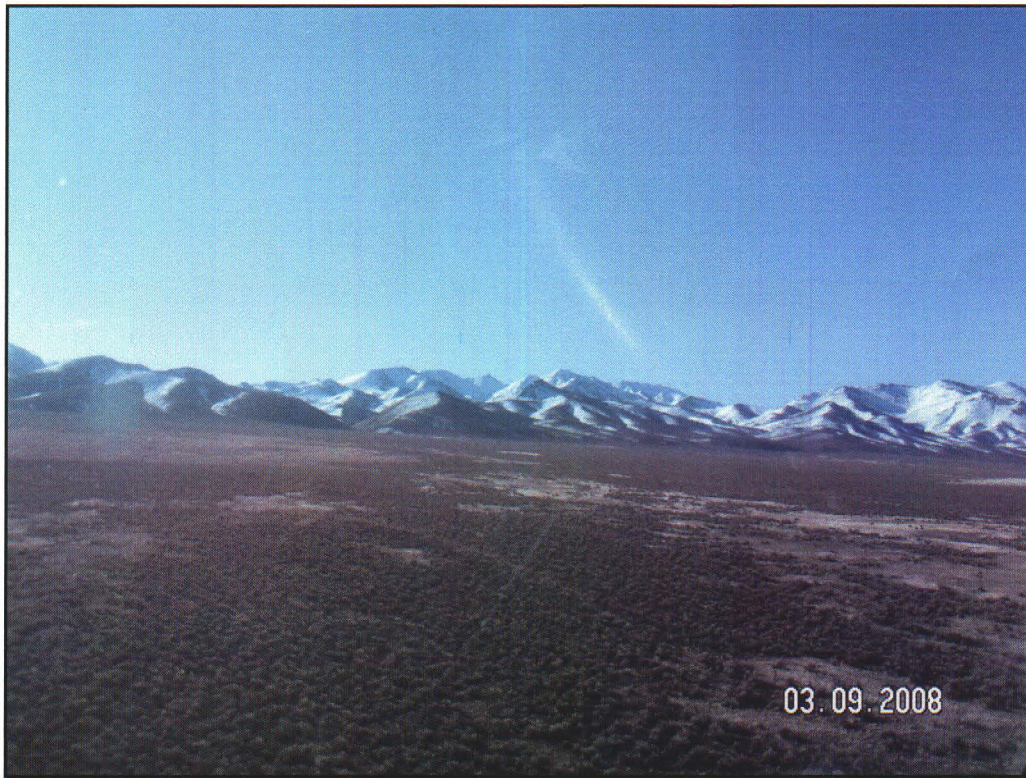
Northern portion of HMA, Grass Valley Allotment.



Callaghan HMA
March 8, 2008



Northwest portion of Callaghan HMA, Hall Creek area.



Northwest portion of Callaghan HMA, Hall Creek area.



Hall Creek area, Austin Allotment



North of Iowa Creek.



General view of terrain northern portion of Callaghan HMA, Austin Allotment



General view of terrain northern portion of Callaghan HMA, Austin Allotment



General view of terrain northern portion of Callaghan HMA, Austin Allotment



General view of terrain northern portion of Callaghan HMA, Austin Allotment



General view of terrain northern portion of Callaghan HMA, Austin Allotment



General view of terrain northern portion of Callaghan HMA, Austin Allotment



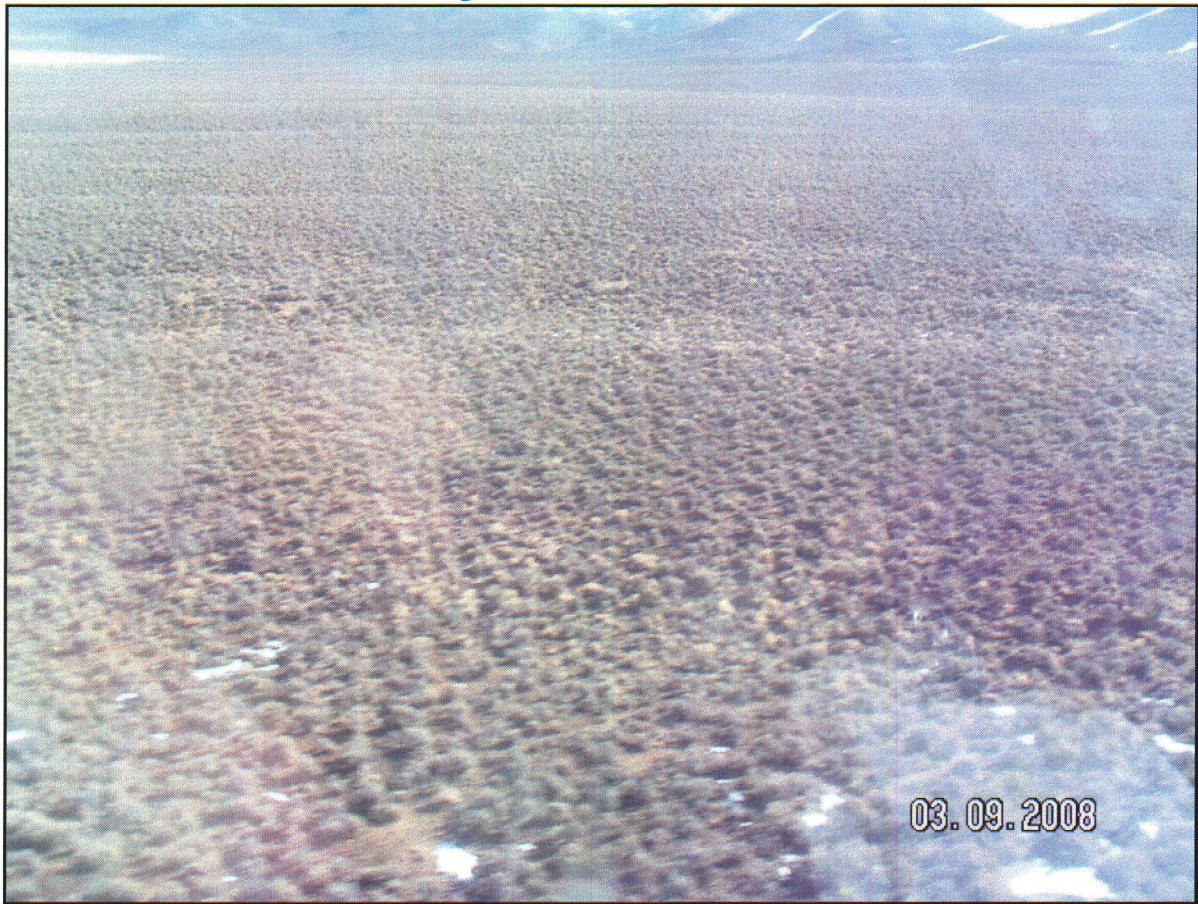
General view of terrain northern portion of Callaghan HMA, Austin Allotment



General view of terrain northern portion of Callaghan HMA, Austin Allotment



North end of Callaghan HMA, Austin Allotment on the flat.



North end of Callaghan HMA, Austin Allotment on the flat.



Austin Allotment, looking north to Bald Mountain and Red Hills.



Austin Allotment, northern portion.



Austin Allotment, headwaters of Iowa Canyon, riparian area





General, Austin Allotment, northern end.



Austin Allotment riparian area



Austin Allotment water source





Austin Allotment, west outside of HMA boundary.



Southern tip of HMA, fenceline.



Grass Valley Allotment, northern portion of the HMA



Grass Valley portion of HMA, northern.



East face of Callaghan HMA, taken from Rocky Hills HMA.



East face of Callaghan HMA, taken from Rocky Hills HMA.



East face of Callaghan HMA, taken from Rocky Hills HMA.