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# Innovative forest management practices in Alberta to address caribou habitat needs

Luigi Morgantini and Wendy Crosina,  
Weyerhaeuser Company, Alberta Forestlands February 2004



## Quick Caribou Facts

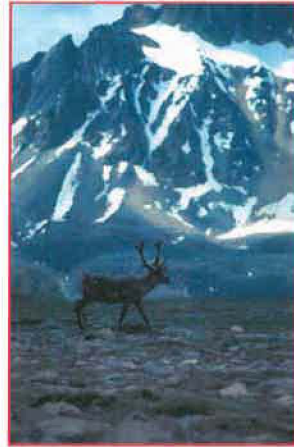
- Woodland caribou are currently listed as a threatened species under the Alberta Wildlife Act and the Federal Endangered Species Act.
- Woodland caribou (the mountain ecotype) winter in large contiguous patches of coniferous forests in the sub-alpine and foothills of Alberta. Woodland caribou winter range extends over approximately 400,000 hectares of Weyerhaeuser's 1,300,000 ha. Grande Prairie FMA.
- In summer, caribou migrate to sub-alpine and alpine ranges.
- Their diet consists mostly of ground and arboreal lichens.



Weyerhaeuser's changed practices were recognized by the Alberta Government Status Report on Woodland Caribou. The company was also awarded the Alberta Emerald Award and a Wildlife Habitat Canada Award for its work to protect caribou habitat.

## Weyerhaeuser Research and Monitoring

- Long-term monitoring and research is a key component of the adaptive management approach Weyerhaeuser is taking to integrate caribou habitat needs into timber planning.
- Weyerhaeuser has been a leader in the work to assist caribou recovery in Alberta. To date, the company has funded \$1 million worth of caribou habitat research conducted by the University of Alberta and has worked with Govt. agencies and other stakeholders.
- Part of the research involves outfitting 62 caribou with GPS (global positioning system) collars and tracking their preferred habitats. The program is aimed at assessing the effectiveness of new forest management practices and furthering our understanding of caribou ecology.



## The Challenge

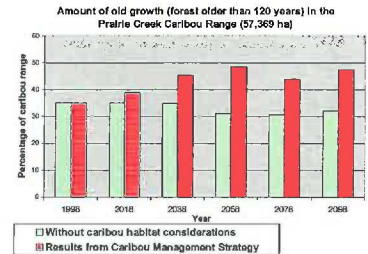
- It is recognized that traditional forest management strategies may not meet the habitat needs of caribou because the animals require older stands, which are usually harvested first using a two- or three-pass harvest pattern. This practice is also contrary to the caribou need for relatively large contiguous tracts of older stands for food and predator avoidance.
- Weyerhaeuser recognizes that a change from the traditional forest management approach in Alberta is needed to minimize the negative impact of forestry activities on the long-term supply of caribou habitat.

## Weyerhaeuser's Approach

- Weyerhaeuser Company, in cooperation with Alberta Fish and Wildlife, has developed an overall strategy to integrate caribou habitat needs into forest management practices.
- To accommodate caribou habitat needs, Weyerhaeuser strategy focuses on two key long-term habitat management principles, which are part of the Detailed Forest Management Plan approved by the Alberta Government in 1999.

Specifically, the objectives are to:

1. Maintain large contiguous patches of habitat for caribou.
  2. Maintain an adequate amount of good habitat across each caribou range.
- Harvesting is concentrated in one contiguous area at a time in large blocks (up to 1,000 ha) rather than harvesting across the entire range using a traditional two- or three-pass harvest pattern. This will avoid fragmentation of the entire range.
  - Harvesting sites will maintain significant amount of structure to provide habitat for other wildlife species.
  - These new contiguous areas will regenerate as an even-aged stand and will be spatially arranged so the remaining parts of the range are not isolated. This will help ensure the perpetuity of quality caribou habitat.
  - This strategy will:
    1. Ensure that the caribou's predator avoidance strategy of dispersing across large areas is not compromised.
    2. Ensure that caribou have the opportunity for unobstructed travel across the range



## Delaying Logging for Caribou!

On February 25, 2004, Weyerhaeuser announced that it will delay harvesting on 82,000 hectares in Alberta, in order to aid protection efforts for the mountain woodland caribou.



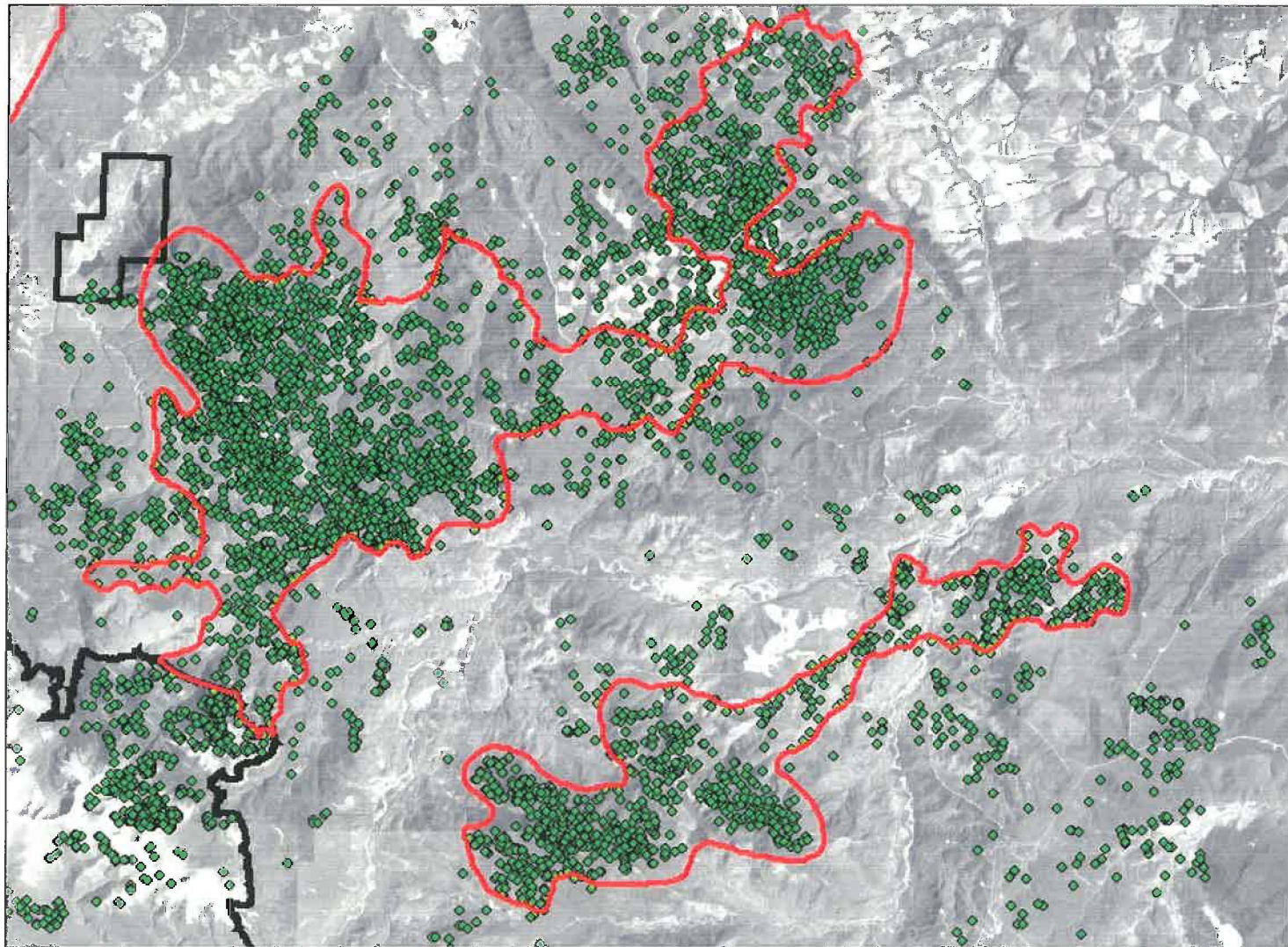
One year ago, the Alberta government created a team to develop a recovery plan for woodland caribou. Weyerhaeuser has decided to delay harvesting while the plan is finalized. "Weyerhaeuser wants time for the recovery plan to be implemented and time for the company to work with government and other stakeholders to assess and implement best practices."





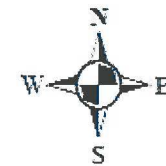
# Caribou High Use Winter Areas

Red Rock/ Prairie Creek Caribou Range



The map was compiled from 14,035 GPS points collected from 51 caribou collars

Caribou GPS location points are standardized at one point per day



## Legend

◆ Caribou GPS Locations

▭ Caribou Deferral Areas

▭ Grande Prairie FMA

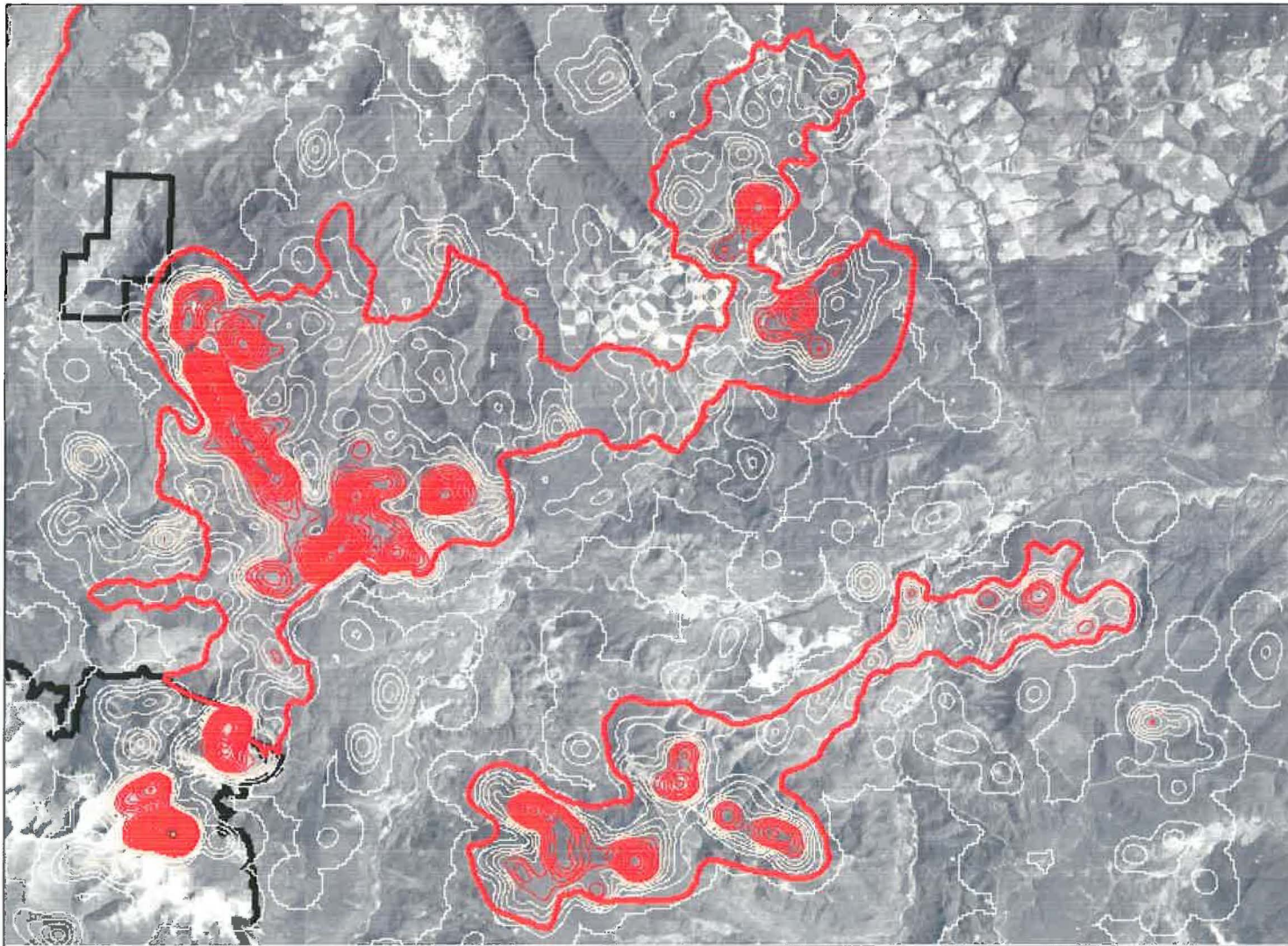




# Caribou High Use Winter Areas

## Red Rock/ Prairie Creek & Daniel Caribou Ranges

Density contour map of caribou use





The map was compiled from 14,035 GPS points collected from 51 caribou collars

Caribou GPS location points are standardized at one point per day



### Legend

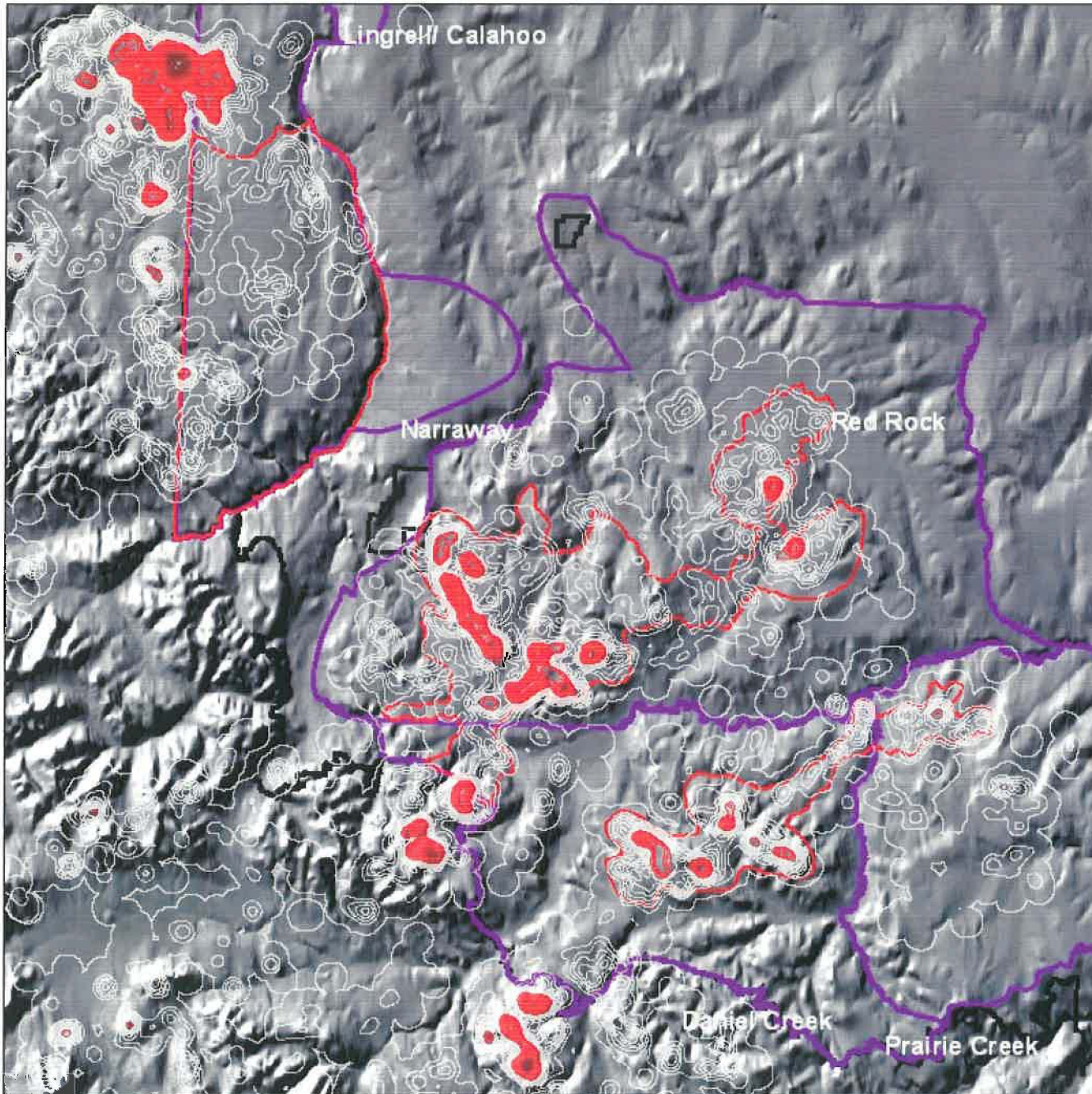
-  Caribou Deferral Areas
-  Grande Prairie FMA



1:250,000



# Red Rock/ Prairie Creek & Narraway Caribou Herds Location Density Map



## Legend

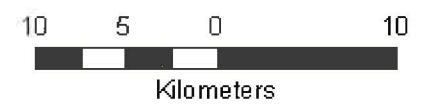
- Caribou Deferral Areas
- Caribou Management Zones
- Grande Prairie FMA

Red Rock/ Prairie Creek Herd  
Data collected between 1998 and 2005  
Map compiled from 14,035 GPS locations  
from 51 caribou collars

Narraway Herd  
Data collected between 2000 and 2005  
Map compiled from 7,106 GPS locations  
from 26 caribou collars

\*Contours represent density of  
caribou GPS locations.

\*Locations are standardized to  
one location per day between  
16h and 20h.



1:400,000

Map created by: Christy Strocel  
Weyerhaeuser Company Ltd.  
Edmonton Forestlands

October 13, 2005



Red Rock/ Prairie Creek  
&  
Naraway  
Caribou Herds

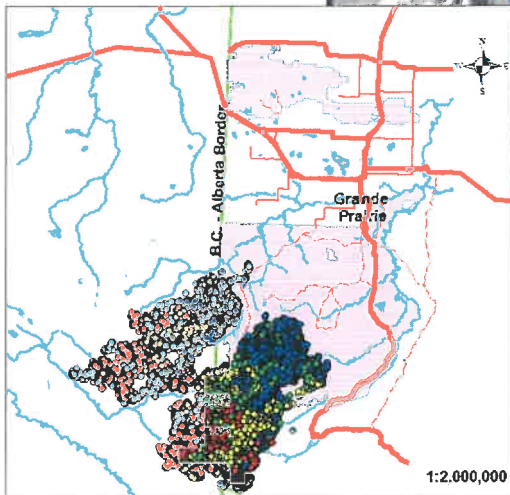
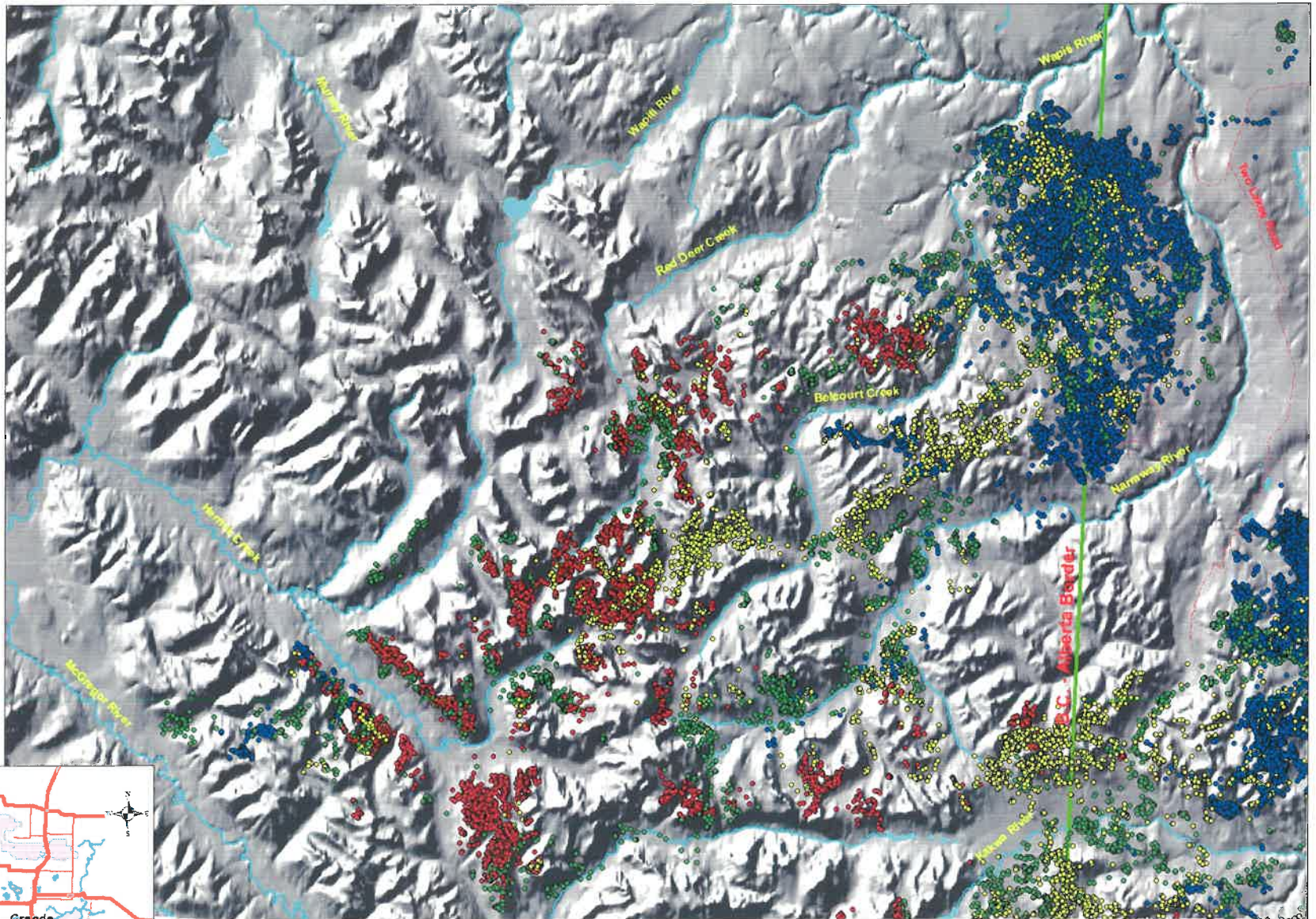
Seasonal  
GPS Locations

1998 - 2004

**Legend**

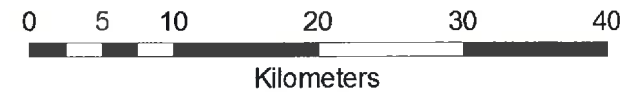
**Caribou GPS Locations**

- Fall
- Winter
- Spring
- Summer
- Highway
- Secondary Highway
- Forestry Roads
- Rivers
- Lakes
- BC-Alberta Border
- Grande Prairie FMA



**Facts and Figures**

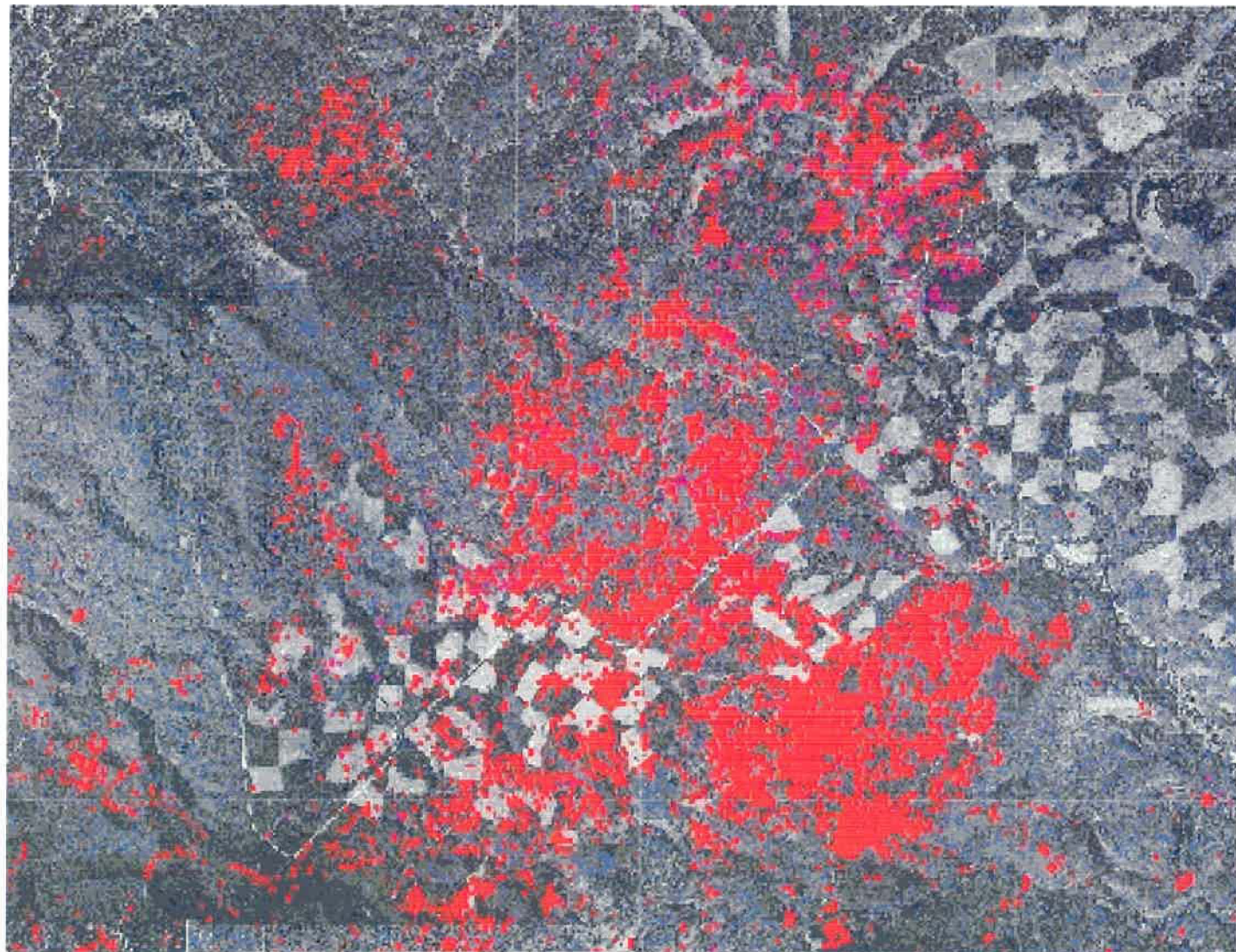
Caribou captured and collared:	NAR	36
	RPC	63
Number of collars from which data was collected:	NAR	26
	RPC	49
Number of GPS locations:	NAR	56,818
	RPC	130,758



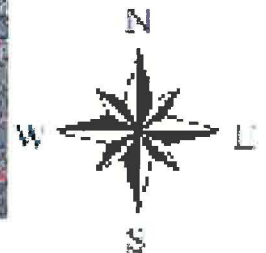
1:250,000

Map created by Christy Stroval  
Weyerhaeuser Company Ltd  
November 4, 2005

**CARIBOU OCCURRENCE IN WINTER: 1999-2003**  
**DATA FROM GPS LOCATIONS (56,409) OF 20 ANIMALS**  
**Red Rock - Chicken Creek area**



3 0 3 6 Kilometers





# WOODLAND CARIBOU DISTRIBUTION IN THE WEYERHAEUSER GRANDE PRAIRIE/GRANDE CACHE FMA

The green dots represent 57,175 GPS locations throughout the year from 62 caribou (1999-2003)

