

TFL 23

Caribou Assessment Report

MACKENZIE CREEK

Block(s): 1, 2, 3, 4, 5 and 6

Submitted to:

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December 16, 2003

BACKGROUND

Planning Unit

Cp 513

AREA: Mackenzie Creek

MAP: see Figure 1

Description

The lower blocks (1,3,4,5 and 6) in the proposed development area are in the ICHwk1 biogeoclimatic variant. Block 2 on the upper south ridge includes both the ESSFwc1 and ESSFwc4 biogeoclimatic variants.

PEM-based seasonal caribou habitat suitability mapping rates the area of the proposed development as moderate for all seasons (Hamilton and Wilson 2002).

Caribou telemetry point locations identified early winter caribou use on the upper south edge of block 4, and the upper south edge of block 2. Numerous late winter locations are just to the south and higher up the ridge from block 4. Summer/fall locations are in the upper basins of Hill, Beaton and Mackenzie Creek to the south of the proposed development area.

Caribou management strategy for TFL23 (LUP Working Group 2002) identifies that all proposed blocks are within the mapped caribou special management zone (Zone 2). Blocks 1 and 5 are partially outside the caribou management area. A caribou connectivity management zone (zone1) has been mapped upstream, and immediately south of block 4.

RESULTS and DISCUSSION

Reconnaissance-level Survey

Doug Seaton and Andrew Alstad conducted a field reconnaissance-level survey of the ridgeline above and to the south of block 2 on September 22, 2003. Access was by helicopter and foot. No evidence of daily or seasonal migration was found along the ridge or to the south of block 2. Coarse talus along the ridgeline could impede animal movement. Field comments are summarized in Appendix I, a satellite image field map is illustrated in Appendix II, caribou habitat assessments were conducted using Wildlife Habitat Assessment field forms (FS882 (5) HRE 98/5; Appendix III), and PEM-based habitat mapping results are illustrated in Appendix IV. Arboreal lichen abundance was estimated according to Armleder et al (1992).

No additional reconnaissance-level surveys have been completed in this planning unit.

Stand-level Surveys

Block 1

Doug Seaton conducted a stand-level survey of block 1 on August 12, 2003. Access was by foot.

Evidence of Use:

A well-defined game trail was identified along the ridgeline in the eastern portion of the proposed block. It was difficult to determine wildlife species using the trail due to human use and disturbance along the trail. No specific caribou use was observed in the area, however caribou pellets were observed along the trail leading between blocks 1 and 3.

Habitat Evaluation:

The mature mixed forest in the west half of the block presently supports very low lichen loading (< Class 1), and sparse vegetative undergrowth. The habitat in this portion of the block was field-rated low for all season for caribou.

The abundance of lichen in the trees increased toward the east side of block 1 (Class 3; 85% *Alectoria spp.*). Lush herbaceous undergrowth is found in the wet seeps along the east side of this block. The habitat in this portion of the block was field-rated high early winter, low late winter and moderate for spring and summer/fall.

PEM-based seasonal caribou habitat suitability mapping rates block 1 as moderate for all seasons.

Other Species:

Bear and deer sign (tracks and scat) was observed along the edge of the clearcut to the east of block 1.

Block 2

Doug Seaton and Andrew Alstad conducted a stand level survey of block 2 on September 22, 2003. Access was by helicopter and foot.

Evidence of Use:

Caribou pellets, tracks and evidence of feeding were observed throughout the upper portion of block 2.

Habitat Evaluation:

PEM-based caribou habitat suitability mapping rates this area as moderate for all seasons. Field-based habitat ratings generally confirmed the PEM-based caribou habitat ratings.

The mature mixed forest supports abundant lichen class 3 (80% *Bryoria spp.*). Lichen availability increases toward the top of block 2. Trees are widely spaced providing good sightability (security).

Other Species:

Bear sign was observed along the upper portion of block 2.

Block 3

Doug Seaton and Andrew Alstad conducted a stand level survey of block 3 on September 22, 2003. Access was by helicopter and foot.

Evidence of Use:

Caribou pellets, tracks and evidence of feeding were observed throughout the east portion of block 3. Trails are faint and intermittent leading down towards block 1 roughly following the proposed road grade.

Habitat Evaluation:

PEM-based caribou habitat suitability mapping rates this block as moderate for all seasons. Field observations of low lichen loading (Class 2; 75% *Alectoria spp.*) and lack of herbaceous forage throughout the area surveyed give this stand a low rating for all seasons.

Other Species:

A small amount of deer sign (tracks) is evident throughout the survey area.

Block 4

Doug Seaton and Herb Stevens conducted a stand level survey of block 4 on August 7, 2003. Access was by ATV and foot.

Evidence of Use:

Caribou pellets, tracks and evidence of feeding were observed throughout block 4. A distinct trail runs along the east boundary of the proposed block, and a well defined trail leads from the slide path along the south boundary into the middle of the block. A trail also leads from the slide path along the north boundary onto the proposed block.

Habitat Evaluation:

PEM-based caribou habitat suitability mapping rates this area as moderate for all seasons. Field-based habitat ratings are consistent with PEM-based caribou habitat ratings. The proximity of slide chutes on each end of this block effectively upgrade these ratings one class.

The mature mixed forest supports lichen class 2, (70% *Alectoria spp.*). Lush herbaceous undergrowth is found along the wet seeps through this stand, where feeding is evident.

Other Species:

Bear and deer sign (tracks, scat) was observed throughout block 4. A recent bear den is found in a large hollow cedar along the upper west edge.

Block 5

Doug Seaton and Herb Stevens conducted a stand level survey of block 5 on September 8, 2003. Access was by 4X4 and foot.

Evidence of Use:

No evidence of caribou use was observed through the area surveyed.

Habitat Evaluation:

PEM-based caribou habitat suitability mapping rates this area moderate for all seasons. Field-based habitat ratings are low for all seasons.

This mature mixed forest is dominated by tall fir and cedar supporting low lichen (< class 1; 85% *Alectoria spp.*). The shaded forest floor lacks herbaceous cover.

Other Species:

Moose and bear sign (scat) was found in the proposed block above the existing clearcut to the northwest.

Block 6

Doug Seaton and Herb Stevens conducted a stand level survey of block 5 on September 8, 2003. Access was by 4X4 and foot.

Evidence of Use:

No evidence of caribou use was observed through the area surveyed.

Habitat Evaluation:

PEM-based caribou habitat suitability mapping rates this area as moderate for all seasons. Field-based habitat ratings are low for all seasons.

This mature mixed forest supports low lichen (< class 1; 85% *Alectoria spp.*). The shaded forest floor lacks herbaceous cover.

Other Species:

Deer tracks were observed along the lower west edge of block 6.

Recommendations

Block 1

Move the eastern block boundary to a minimum of 30 meters west of the trail running along the ridgeline in order to maintain security cover for this trail.

Apply measures for general biodiversity in silviculture and harvest prescriptions throughout the remainder of the block.

Block 2

Harvest in small groups (approximately 0.5 ha. openings), or narrow strips with 66% of the existing area retention.

Block 3

Harvest narrow strips approximately 10 meters wide with a basal area retention of 20 – 25 sq. meters per hectare. Target adjacent to slide chutes and wet seeps as leave strips. All windrow debris along harvest corridors should be bucked flat so as not to impede movement.

Extend block 3 southward toward the slide chute using the above harvesting methods. These harvesting methods will attempt to simulate a series of slide chutes providing herbaceous undergrowth, and also open up the remaining timber to encourage lichen growth.

Block 4

Defer harvesting in block 4 until the effect of harvesting in block 3 has been monitored.

Block 5

Apply measures for general biodiversity in silviculture and harvest prescriptions.

Block 6

Apply measures for general biodiversity in silviculture and harvest prescriptions.

Caribou management zonation:

See Appendix 11 for proposed changes to the caribou special management zone (zone 2) line.

References Cited

- Armleder, H.M., S. Stevenson, and S.D. Walker. 1992. Estimating the Abundance of Arboreal Forage Lichens. Land Management Handbook Field Guide Insert 7. Ministry of Forests, Research Program, Victoria, BC.
- Hamilton, D., and S.F. Wilson. 2002. Central Selkirk Mountain Caribou Habitat Use and Species-habitat Model for TFL23. Prepared for Pope & Talbot, Nakusp, BC.
- LUP (Landscape Unit Planning) Working Group. 2002. Caribou Management in TFL#23: Agreement for District-Level Implementation Issues. Prepared for Arrow Forest District, Castlegar, BC.

List of Appendices

- Appendix I: Field Comments
- Appendix II: Map
- Appendix III: WHA field cards
- Appendix IV: Photos
- Appendix III: PEM Based Caribou Habitat Ratings

Appendix I: Field Comments

<u>COMMENTS</u> Supplemental Field Form for TFL#23 Caribou Assessment			
To be used in conjunction with the WHA field forms and PU field map			
COMMENTS (Reference No. to also be located on Field Map)			
Reference No.	Lat/North	Long/East	COMMENTS
1			Bear Den in large cedar
2			Caribou feeding recently along wet seeps. Trails and fresh sign.
3			No lichen, less than class 1. Dry site, sparse vegetation on forest floor. Poor caribou habitat in all seasons.
4			Lichen class 1, 85% alectoria. Faint deer trail sparse vegetation on forest floor. Poor caribou habitat in all seasons.
5			Well defined trail running up the ridgeline
6			Widely spaced trees. Caribou and bear sign.
7			Poor caribou habitat all seasons
8			Lichen class 1, 85% alectoria. sparse vegetation on forest floor. Large fir and cedar. Poor caribou habitat all seasons
9			
10			
11			
12			

Appendix II: Map

Appendix III: WHA field cards

Appendix IV: Photos

Trail through block 4

Bear den in block 4

Appendix V: PEM Based Caribou Habitat Ratings