

Caribou Zone of Influence and Diamond Mines



photo Ekati mine Dominion Diamond

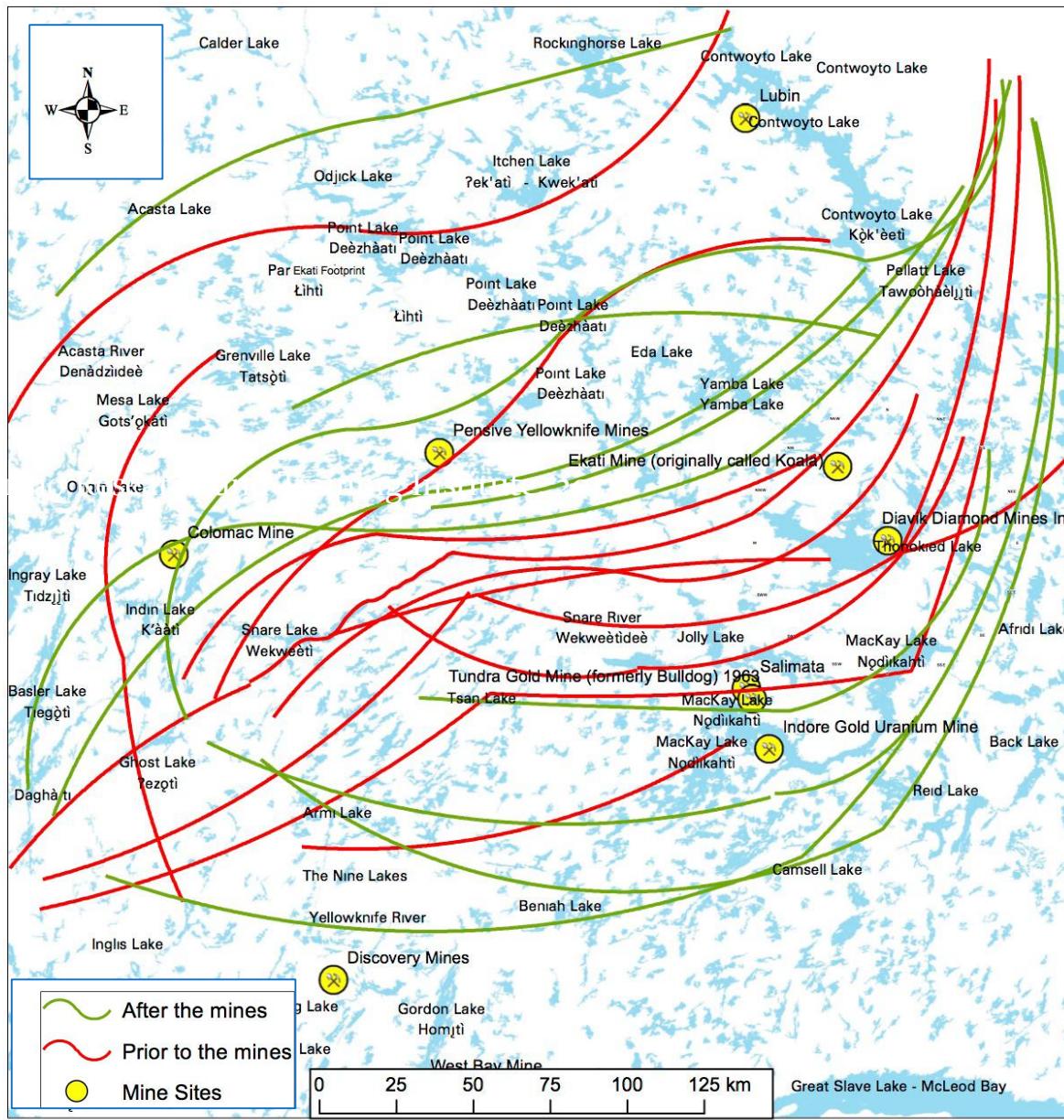
**John Boulanger
Kim Poole***
**Anne Gunn
Jack Wierzchowski**

Workshop on Protecting
Caribou and their Habitat

Iqaluit, November 2015

* kpoole@aurorawildlife.com

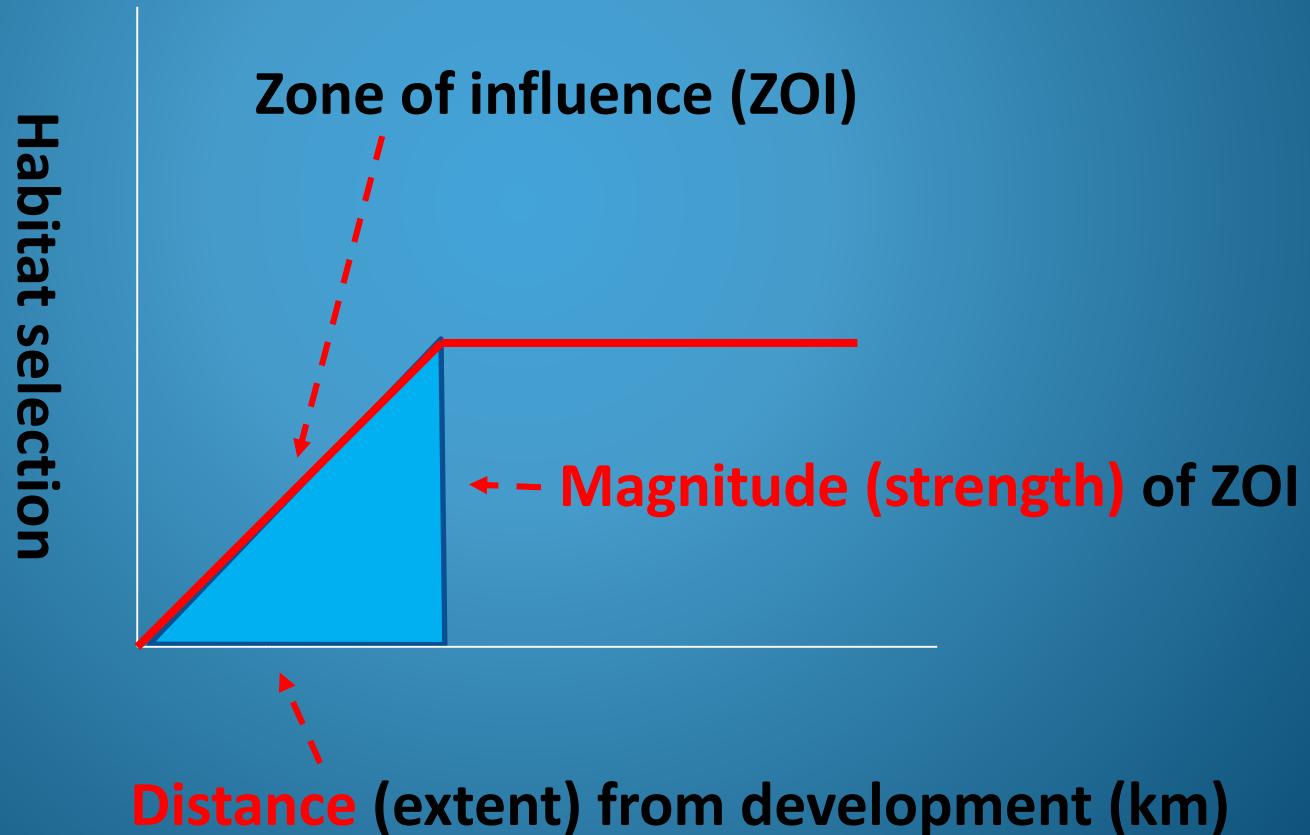
• Tlicho elders since 1990s suggest caribou have changed migration to deflect around diamond mines



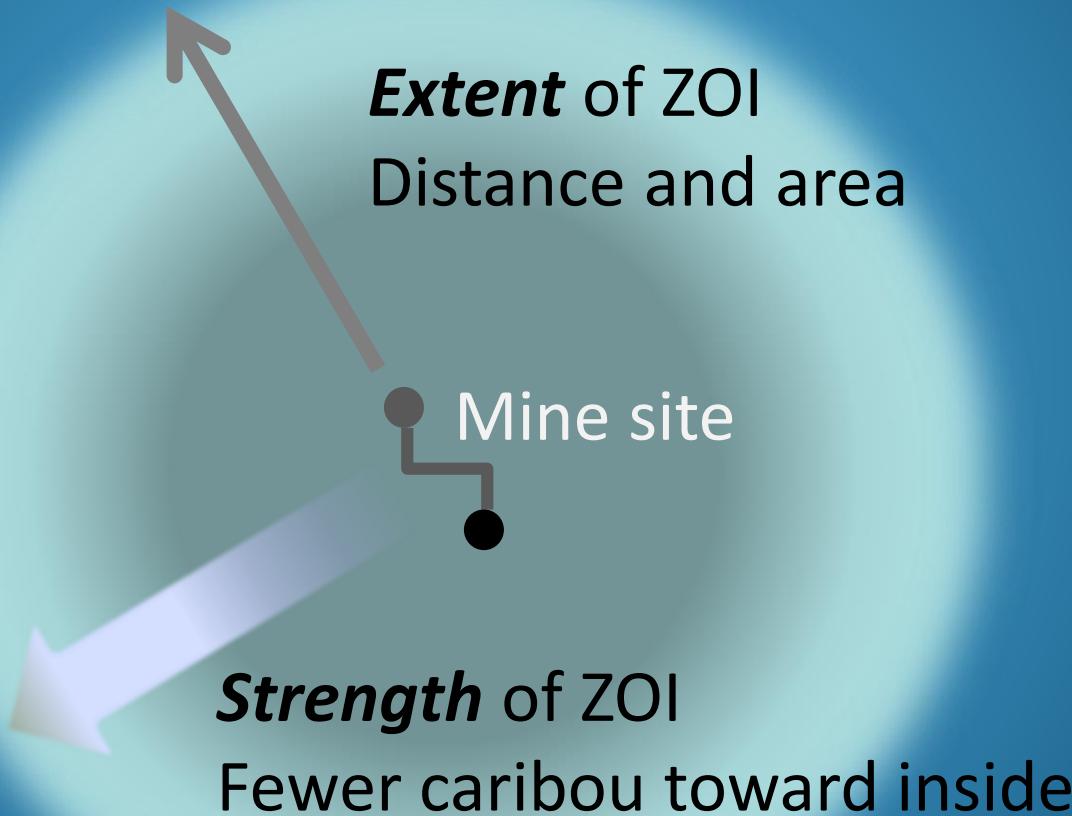
Bathurst Caribou Migration Trails

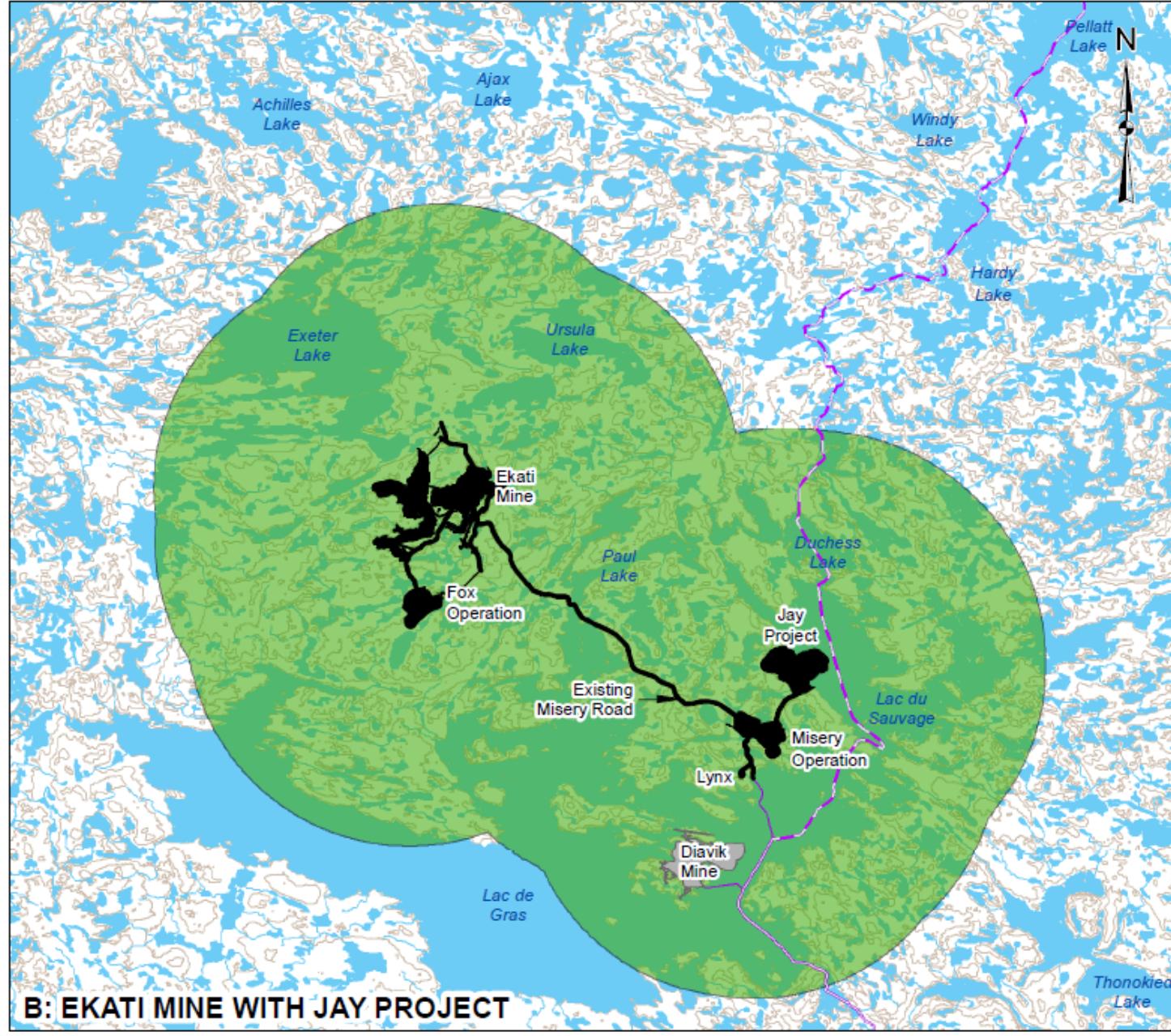
Tłı̨chǫ Traditional Knowledge

Zone of influence and habitat selection

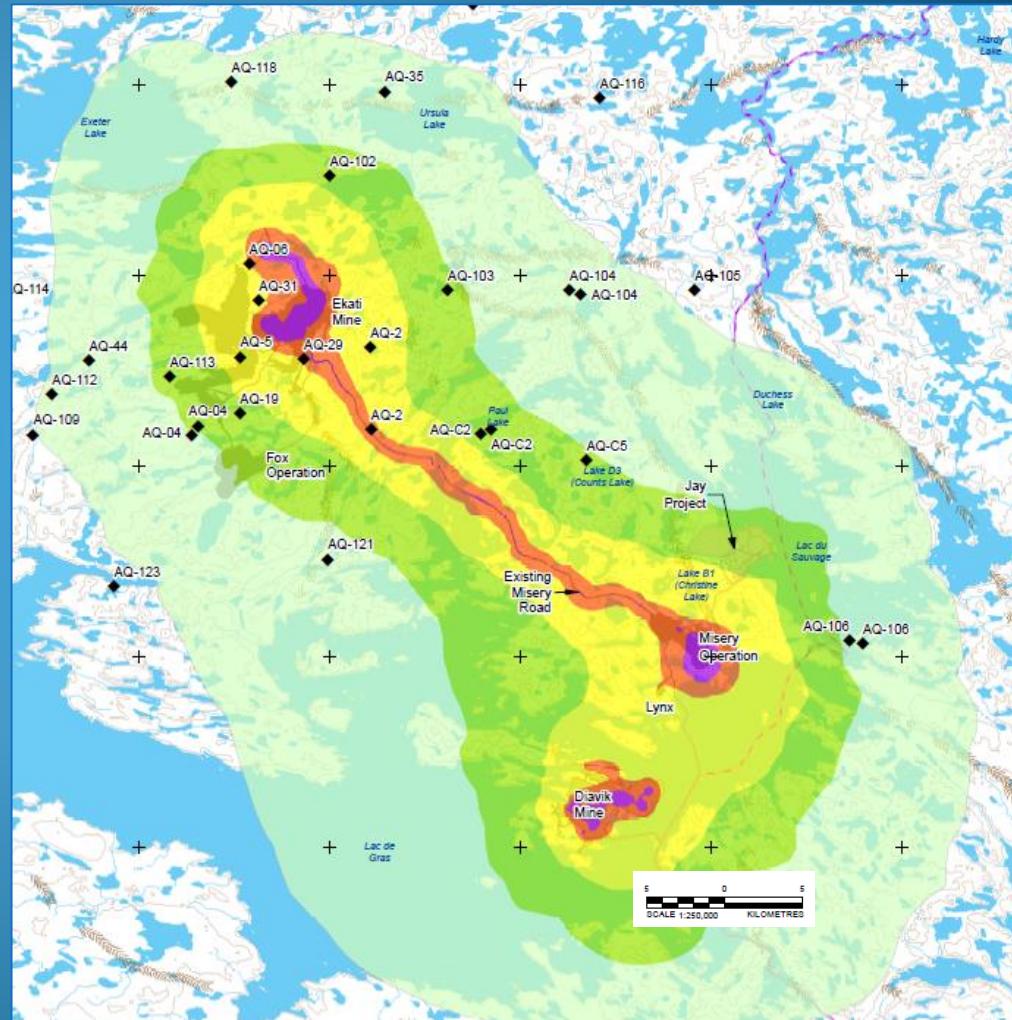


Zone of Influence





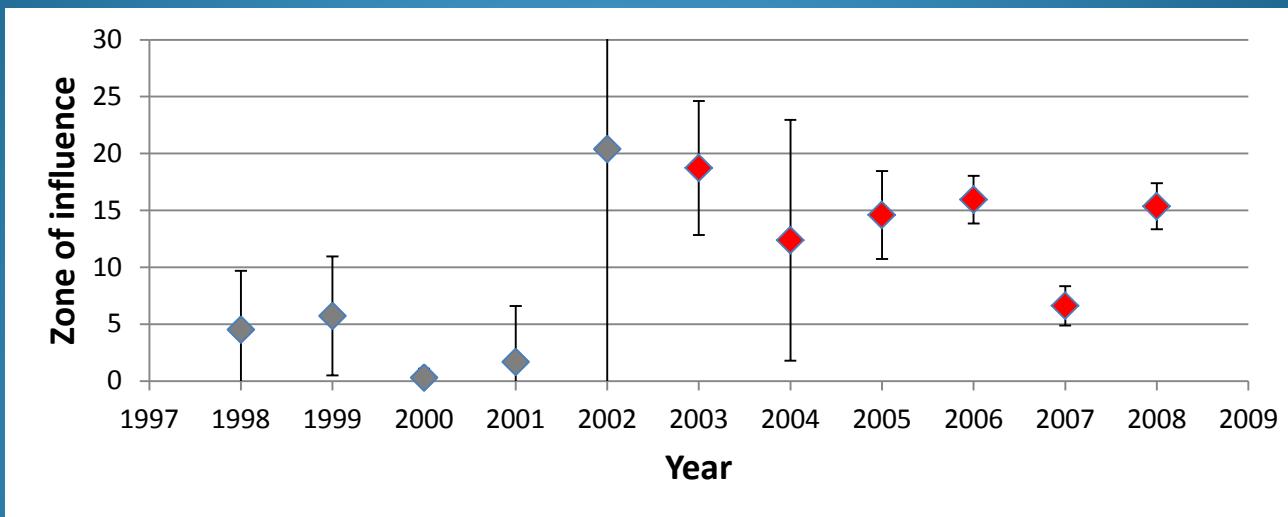
Fine particle dust - possible cause of zone of influence



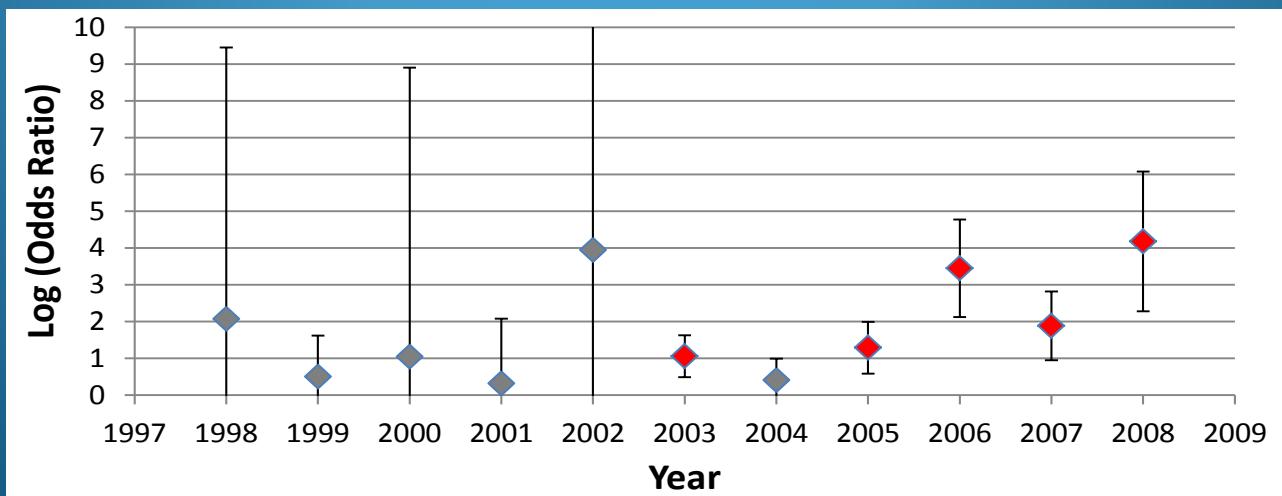
TSP deposition rate: DDEC response to
DAR-MVEIRB-IR-97, Jay assessment

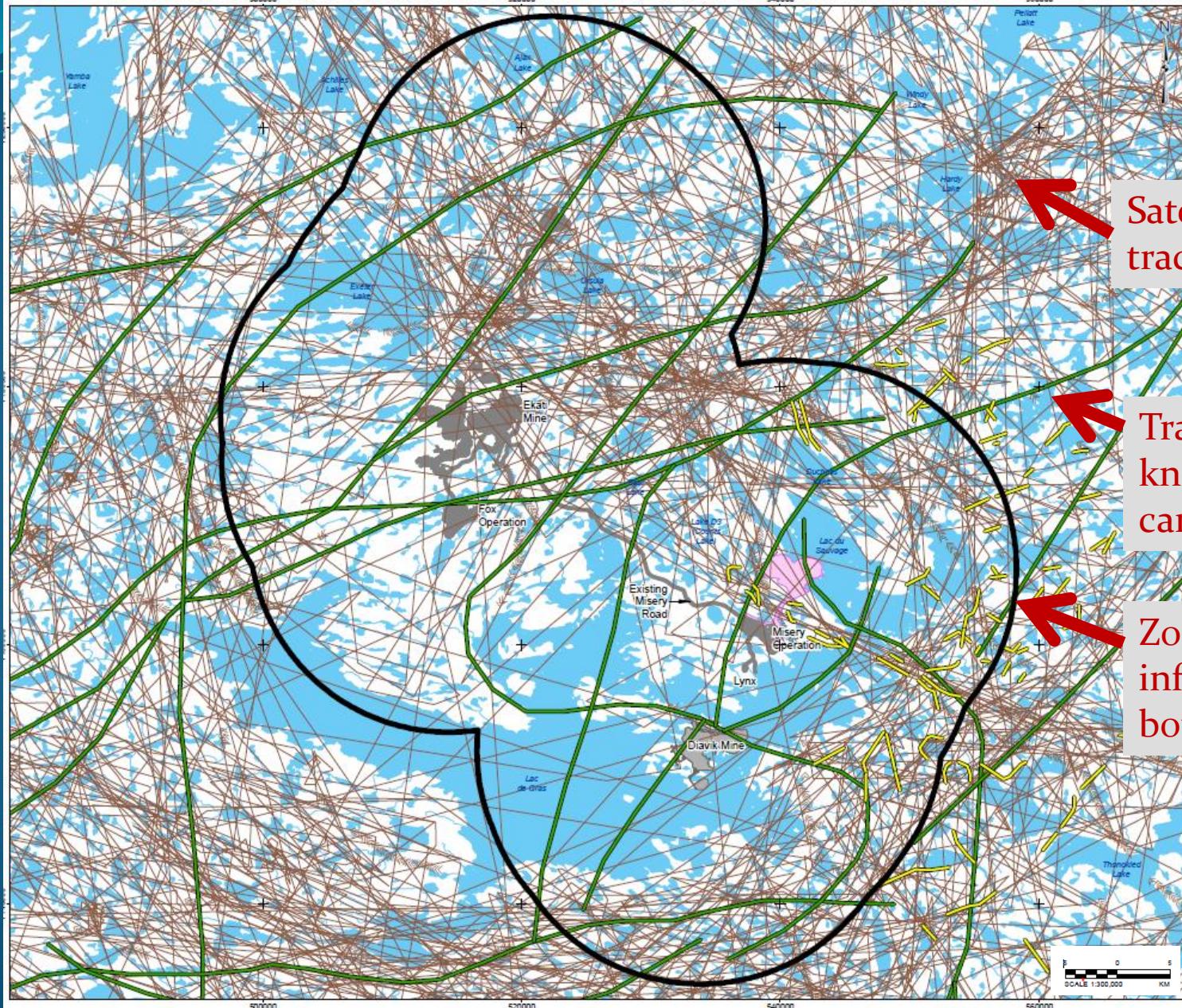
Annual Zone of influence estimates

Distance



Magnitude



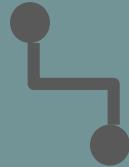


Dominion response to DAR-MVEIRB-IR-92, Jay pit assessment

Caribou change behaviour within zone of influence

Behavioural
responses

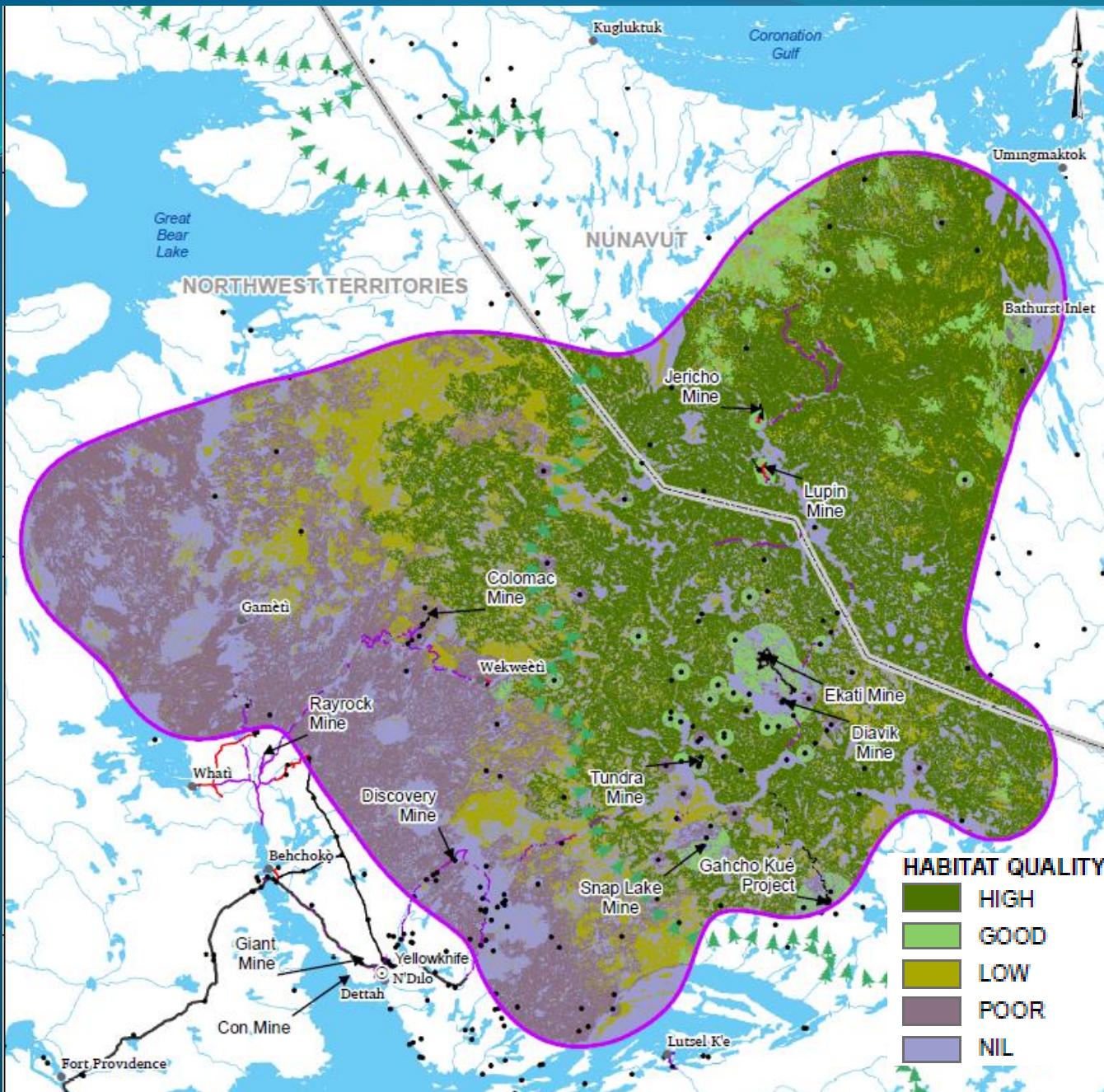
Mine site



Activity
budget

Diet

Zone of influence and cumulative effects



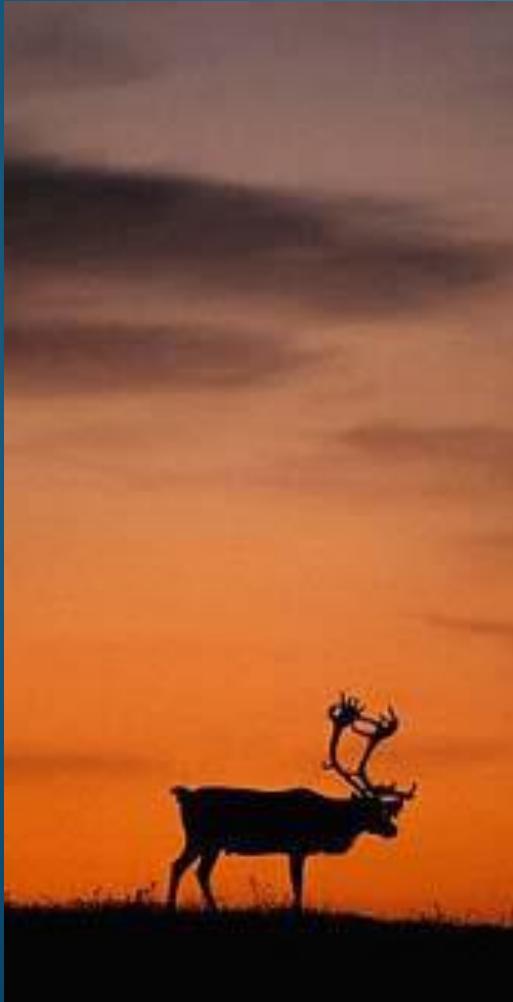
Dominion Jay pit assessment Spring Range Map12.A-2

Findings:



- Zone of influence is a large residual effect despite mitigation (dust and traffic control)
- Key to measuring cumulative effects

Parting comments



- Zone of influence extent and strength will vary among seasons and ranges (water crossings a question)
- GNWT: Zone of Influence Technical Task Group