

# yukonwild

## oil and gas in the yukon



Eagle Plains, YT - 70% of the ecoregion was included in the most recent call for oil and gas leases. Inset - Seismic lines, roads and drill pads in Alberta's Swan Hills, 1964

*Governments talk about balancing the protection of the territory's wild & beautiful places with the need for resource development. However, last year big chunks of the territory were opened to potential oil and gas exploration without public consultation. This move pre-empted the Yukon Protected Areas Strategy, a strategy which seeks to balance nature with development. Before all the deals are done, Yukoners need to know the facts about the potential impacts of oil and gas development and be given a voice in how and where the resource is developed.*

The Yukon is entering an exciting stage in its economic development. The territory is gaining greater control over natural resources and the economy is diversifying. Oil and gas development will be one of many potential elements in this effort to diversify. However, it must be done in a way that doesn't jeopardise the Yukon's most valuable long-term asset, the lands, water and wildlife we all depend on.

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In 1998, the Yukon government passed the Yukon Protected Areas Strategy (YPAS), a broadly supported and visionary document that concluded 10 years of public discussion. By protecting parts of the Yukon's unique natural regions, the Strategy aims to "ensure that future generations will always have places where nature's master plan remains intact". Implementation of this strategy is still in its early stages and there is much work to be done by Yukon communities to decide how they will manage these unique and valuable areas.

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and visionaries document that concluded 10 years of public discussion. By protecting parts of the Yukon's unique natural regions, the Strategy aims to "ensure that future generations will always have places where nature's master plan remains intact". Implementation of this

Unfortunately, before Yukoners have been given the opportunity to say which areas they feel should be protected, oil and gas companies have been invited to explore large portions of the territory. This has undermined the process laid out in the Yukon Protected Areas Strategy and avoided asking Yukoners which areas should be opened up for oil and gas exploration.

Yukoners don't need to look far to see the potential impacts of oil and gas development. In Alberta and British Columbia it has contributed to significant habitat loss for many wildlife species, water and soil pollution, and raised concerns about human health effects.

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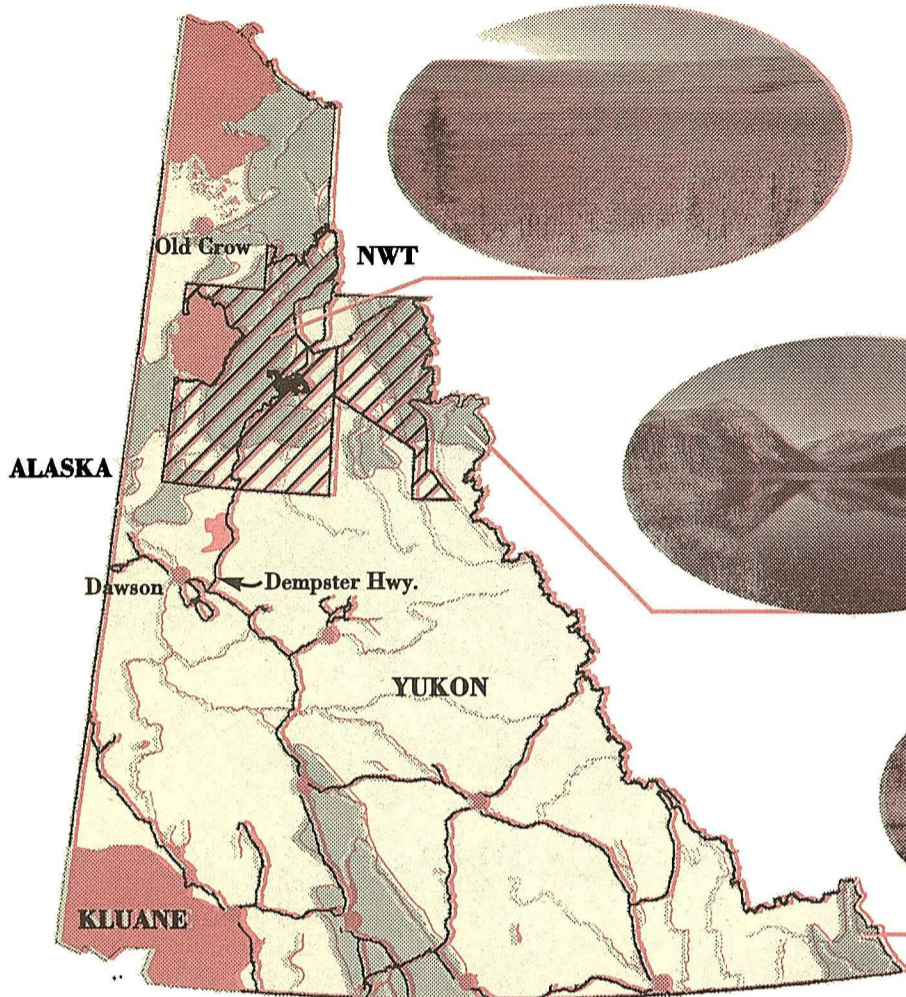
What's the rush to sell off the Yukon's future with unplanned giveaways of oil and gas leases? The Yukon is one of the few places left

What's the rush to sell off the Yukon's future with unplanned giveaways of oil and gas leases?

in North America where oil and gas development could be planned properly, in a way that doesn't compromise other valuable natural resources. Let Yukon people decide the pace and scale of oil and gas development and what lands they wish to keep free of roads, rigs and pipelines.





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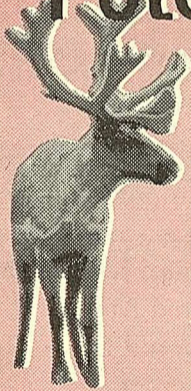


- The Yukon's potential oil and gas basins are located in the southeast, south central and northern regions of the territory.
- In 1999 the Yukon government put out a "Call for Nominations" inviting oil and gas companies to purchase exploration leases in the territory.
- The areas offered in the 1999 Call for Nominations were twice the size of Kluane National Park, the Yukon's largest park.
- Although only two exploration leases were sold in 1999 totalling 800 km<sup>2</sup>, the recent push for new pipelines in the north could accelerate the demand for leases in the next few years.

### Legend

-  potential oil and gas basins
-  1999 Call for Nominations area
-  exploration leases sold in 1999
-  existing protected areas

## Potential Impacts of Oil and Gas Development



### HABITAT LOSS

The most significant wildlife impacts of oil and gas development are habitat disruption and fragmentation. These occur as a result of industrial access such as roads, seismic lines, and pipe lines, often referred to as linear disturbances. Studies show that many wildlife populations decline as road densities increase.<sup>1</sup> Large mammals such as wolf, grizzly bears and caribou are the most adversely affected by this type of development.<sup>2</sup>

Recent research on woodland caribou in north-east Alberta shows that habitat loss associated with industrial development extends far beyond the physical area used by the industrial operations themselves.<sup>3</sup> The study found that roads were a significant disruption to caribou movements throughout the year. U.S. forest service research on grizzly bears indicates that at road densities of 0.8 km road/km<sup>2</sup>, habitat effectiveness for the bears is reduced to 50% and at road densities of 1.6 km road/km<sup>2</sup>, habitat effectiveness is further reduced to 25%. The current average density of linear disturbances, including roads, in the oil and gas producing regions of Alberta's boreal forests is 2.4 km of disturbance/km<sup>2</sup>.

### WATER AND SOIL POLLUTION

Water and soil pollution can occur at several stages in the process of oil and gas development including spills, pipeline leaks, and on-site disposal of oilfield wastes.

Spills and leaks resulting in contamination of soil and water occur frequently in oil and gas producing areas. For example, between 1980 and 1997 there was an average of 674 pipeline failures per year in Alberta.<sup>4</sup>



A number of common oil field waste disposal practices also have the potential to seriously pollute soils and surface waters.<sup>5</sup> Contaminants including salts, metals and hydrocarbons used in the drilling process are often disposed of by diluting the substance in the local environment. Although there are rules around disposal, many of these practices receive little or no oversight by regulatory bodies and the risk of getting caught breaking the rules is very low.

### HEALTH CONCERNS

Rural landowners in Alberta have long complained that pollution from the oil and gas industry is having an adverse impact on their operations and health.

Of greatest concern is the potential for exposure to hydrogen sulphide (H<sub>2</sub>S) as a result of the exploration, transmission, processing, and disposal of sour gas. H<sub>2</sub>S is acutely toxic to humans at low levels. Although the risk of sour gas releases has been reduced in the past 20 years, large-volume accidental releases still occur.

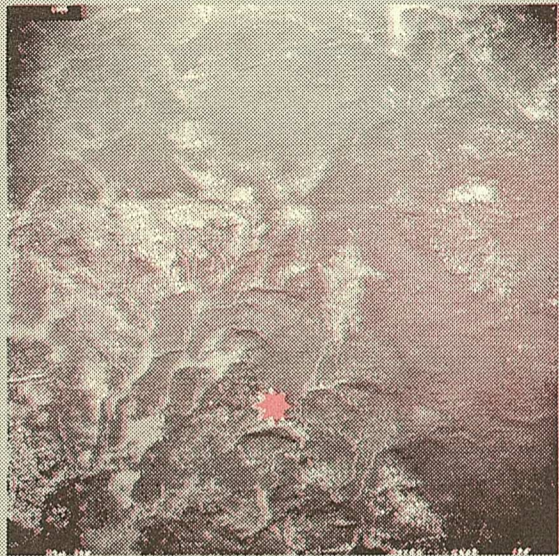
Until recently, industry and governments have questioned the validity of health complaints associated with oil and gas development. However, a growing body of hard scientific evidence is emerging that supports these long-standing concerns and seriously challenges industry claims that their activities have no negative health impacts.<sup>6</sup>



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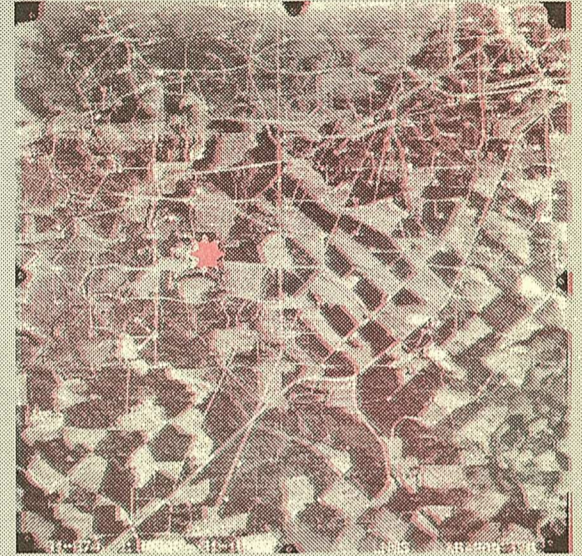
Yukoners don't need a crystal ball to see the future...



Swan Hills, Alberta • 1949



Swan Hills, Alberta • 1964



Swan Hills, Alberta • 1991

...they just have to look at Alberta

Fifty years ago, forests in the Alberta and British Columbia portions of the Western Canadian Sedimentary Basin, Canada's major oil and gas producing region, were mostly free of roads and other linear disturbances. In fact they were much like those in the Yukon today. Over the last fifty years, these forests have been fragmented by more than 1.3 million kilometres of linear disturbances.<sup>7</sup> These disturbances include roads, seismic lines, pipelines and power lines, much of which are the result of oil and gas development.

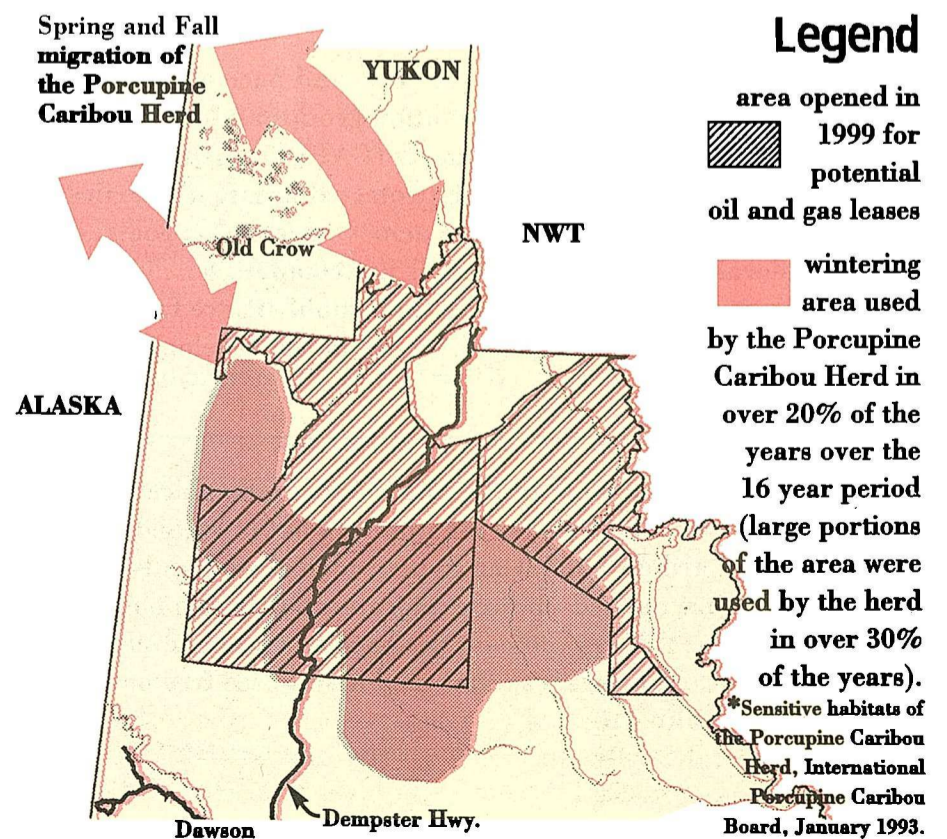
Within the 545,000 km<sup>2</sup> of forests in the Alberta and BC portions of the basin (an area larger than the total area of the Yukon), the average density of linear disturbances is 2.4 kilometres of disturbance in every square kilometre. The result of this industrial access has been to fragment the basin's forests into thousands of tiny patches. Only 6% of these patches are larger than 9 km<sup>2</sup> in size. This has resulted in a significant fragmentation of wildlife habitat and encouraged access to areas that only decades ago were relatively untouched.

## Oil, Gas and the Porcupine Caribou Herd

The Porcupine Caribou Herd is comprised of 130,000 animals whose migrations cover large parts of northern Alaska, the Yukon, and parts of western NWT. The culture and economics of 16 First Nation communities across the western arctic are intimately connected with the herd. Despite the unique ecology of the Porcupine Caribou and its important relationship to the lives of many northern people, there is increasing pressure to open up the habitat of the herd to oil and gas development. The first threat is the proposal to open up the herd's critical calving grounds in Alaska for oil and gas development. The most recent threat, however, comes from right here at home.

While First Nations have been lobbying U.S. senators to remove their proposal for oil and gas development in the Porcupine Caribou summer habitat, large portions of the herd's fall and winter habitat are potentially being threatened in the Yukon. The areas opened for oil and gas exploration leases in the 1999 Call for Nominations not only included fall and winter habitat but also cut across fall and spring migration routes. The potential impacts of oil and gas development in these areas are not well understood. However, studies from other jurisdictions suggest that if the development is not properly planned and managed, the impacts to the land could be significant.

### Overlap of Porcupine Caribou Winter Range and 1999 Call for Oil and Gas Nominations



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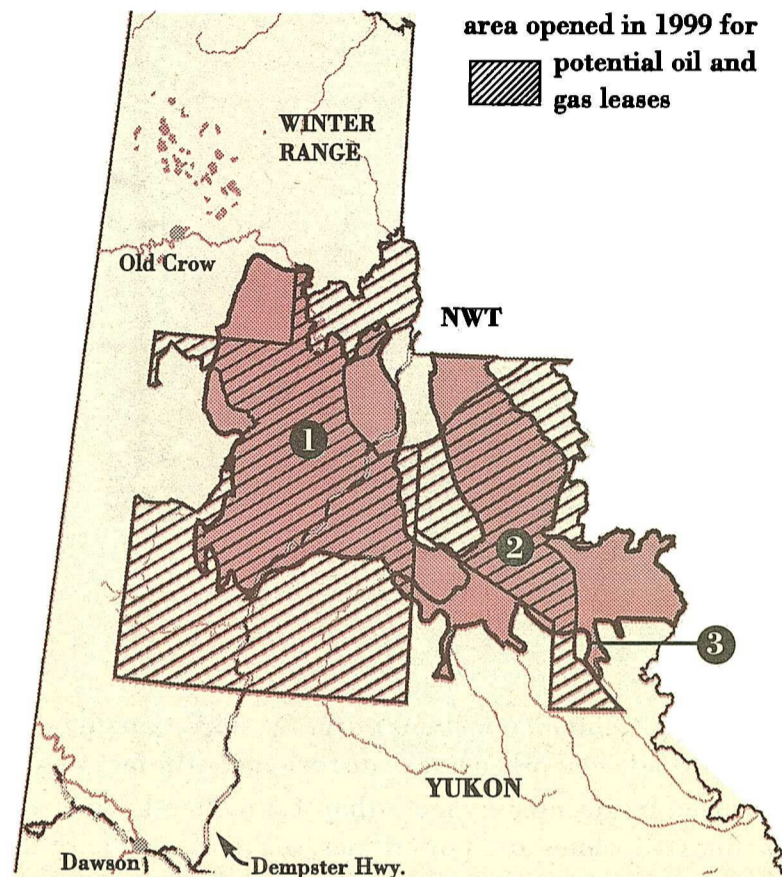
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### Oil, Gas and Protected Areas

The Yukon has 23 unique ecoregions within the territory and the Yukon government has committed to protect representative core areas within each. A similar commitment to protect eco-regions exists in every other Canadian province and territory. Despite this commitment, significant portions of several ecoregions were opened up last year for oil and gas exploration before the public was asked for input on conservation goals. The YPAS process has not yet been given a chance to adequately examine most of the areas. Of particular concern are:

- 1 Eagle Plains ecoregion — more than 70% was included in the 1999 oil and gas call for nominations;
- 2 Peel River Plateau ecoregion — more than 50% was included in the 1999 oil and gas call for nominations; and,
- 3 Bonnet Plume Canadian Heritage River — parts were opened or oil and gas in the call for nominations.

### Yukon Ecoregions Included in the 1999 Call for Oil and Gas Nominations



### SOURCES

- 1 United States Dept. of Agriculture-Forest Service, *Forest Service Roads: A Synthesis of Scientific Information* (Washington, DC: USDA-Forest Service, 1999), p.49.
- 2 Silva Forest Foundation, *Assessing the Ecological Impacts of Timber Harvesting: Apparent Impacts, Actual Impacts, and Precautionary Forest Development Planning* (Winlaw, BC: Silva Forest Fdn., 1999), p.8.
- 3 Dyer, F. 1999. "Movement and distribution of woodland caribou (*Rangifer tarandus*) in response to industrial development in northeastern Alberta." Master of Science in Environmental Biology and Ecology Thesis, University of Alberta.
- 4 Alberta Energy and Utilities Board, *Report 98-G, Pipeline Performance in Alberta 1980-1997* (Calgary: Alberta Energy and Utilities Board, Dec. 1998).
- 5 Pembina Institute for Appropriate Development, *Beyond Eco-terrorism: The Deeper Issues Affecting Alberta's Oilpatch* (Drayton Valley, AB: Pembina Institute for Appropriate Development, Feb. 1999), p.9.
- 6 *ibid.*
- 7 Global Forest Watch, *Canada's Forests at a Crossroads: An Assessment in the Year 2000*, (World Resources Inst., 2000), p.30.

## A Responsible Approach to Oil and Gas in the Yukon

### A responsible model already exists

Due to growing concerns over the scale and pace of oil and gas development in Alberta, conservation groups and the Canadian Association of Petroleum Producers (CAPP) came together in 1998 to seek common ground on protected areas. All parties agreed that in sites designated to achieve protection goals, oil and gas exploration and development is not compatible. The parties also identified a set of principles that would ensure fairness and the maintenance of biological diversity in the development of protected areas.

Oil and gas development in the Yukon must take place in a responsible way. This means identifying what is needed to protect Porcupine Caribou habitat and other critical wildlands before more areas are opened up for exploration. This also means consulting the Yukon public on the pace and scale of oil and gas development, and the areas that they wish to see free of development altogether.

### A RESPONSIBLE APPROACH TO OIL AND GAS DEVELOPMENT BY THE YUKON GOVERNMENT SHOULD INCLUDE THE FOLLOWING:

- ➔ Identification of sensitive wildlife habitat and critical wildlands before sale of further oil and gas leases.
- ➔ Planning for candidate protected areas before, or in conjunction with, planning to identify areas for future oil and gas development.
- ➔ Public consultation on areas to be opened up for potential exploration and development.
- ➔ The formation of a public advisory committee to advise government on approaches to oil and gas development, similar to the Pipeline Advisory Committee.
- ➔ The development of a Yukon specific strategy to mitigate the environmental impacts in areas opened for oil and gas development.
- ➔ The facilitation of a memorandum of understanding between the oil and gas industry, Yukon communities, and non-governmental organizations that seeks common ground on protected areas and conservation.