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M E M O R A N D U M

TO: DRAFT 1

FROM: Jesse Duke

DATE: Friday, November 02, 2001

SUBJECT: Current state of exploration industry

There continues to be debate about the reasons for the current state of the exploration industry. It is not clear to me there is a full understanding of the seriousness of the situation, or the causes. The following analysis is an attempt to frame this impact in a rational manner.

Your comments about this matter and the validity of this approach is welcome.

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Table 2

Source: Natural Resources Canada, from a federal-provincial survey of mining and exploration companies (in percentage of total Canadian exploration expenditures)

	1993	1994	1995	1996	1997	1998	1999(p)	2000(e)
Yukon Territory	**4.0**	**4.1**	**5.5**	**5.2**	**5.0**	**3.1**	**2.6**	**2.4**
Newfoundland	1.9	2.0	9.9	10.3	7.8	7.3	6.5	4.6
Nova Scotia	0.4	0.3	0.4	0.8	0.9	1.0	0.8	1.2
New Brunswick	2.3	1.6	1.8	1.7	1.5	1.5	1.7	1.7
Quebec	22.2	20.7	17.2	15.3	18.8	19.4	21.8	15.4
Ontario	15.8	18.0	18.1	21.8	20.6	17.5	17.0	20.2
Manitoba	5.7	6.5	4.5	4.6	4.5	4.6	5.1	5.0
Saskatchewan	11.1	8.1	6.1	5.7	6.1	9.5	5.7	7.0
Alberta	1.5	1.5	1.5	1.2	3.0	4.2	3.5	3.5
British Columbia	13.8	13.5	11.1	11.7	12.5	8.3	8.4	8.3
Northwest Territories	21.1	23.8	24.0	21.7	19.4	23.7	20.6	23.8
Nunavut							6.3	7.1
Total Expenditures (in millions of dollars)			717.6	894.8	921.0	655.9	501.1	502.1

Note 1) 1999(p) - preliminary estimates
Note 2) 2000(e) - company spending intention

Assuming the relationship between land mass and exploration expenditures is valid, then it follows that Yukon exploration expenditures this year should be at least 4% of $458 million or $18.3 million. This suggests a lost opportunity this year of $12 million.

WHY IS YUKON NOT RECEIVING ITS NORMAL SHARE OF CANADA'S EXPLORATION DOLLARS?

The decline in relative expenditures compared to other Canadian jurisdictions cannot be explained based upon commodity prices. Regional events appear to play a significant role. These events can serve to focus expenditures away from the Yukon.

Research completed by the Institute for Global Resources and Policy concluded that the top two investment criteria are 1) geological potential and 2)security of tenure.[1] Public comments from industry leaders in Canada and Yukon appear to support this conclusion.

There is an emerging understanding of Yukon's geological potential, which has enhanced Yukon's attractiveness with the recent discoveries (Findlayson Lake massive sulphide deposits, and Tintina Gold Belt deposits). These expenditiures would be expected to track positively with worldwide expenditures. Yukon would generally not expect to see a significant decline. Some impact within Canada is possible with the following examples:

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- <u>Yukon, British Columbia and Newfoundland</u> have experienced a decrease in their percentage share of Canadian exploration expenditures in recent years. BC and Newfoundland both have examples of high-profile decisions that are damaging to the mining industry.

- <u>Northwest Territories, Alberta, Ontario and Saskatchewan</u> have benefited from continued interest in diamond exploration.

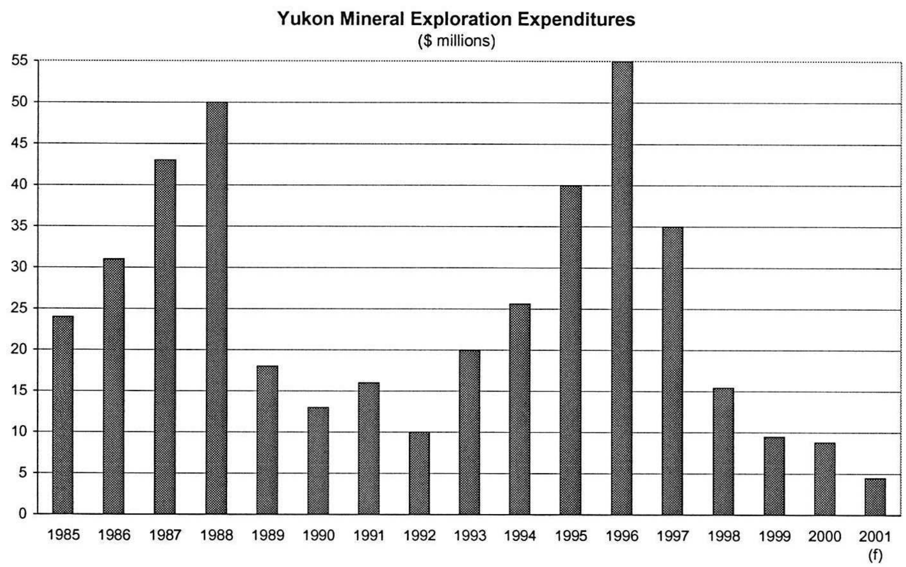
[1] Issues Affecting Country Competitiveness, James M. Otta, Institute for glboal Resourcnces Policy and management, Colorado School of Mines.

EXPLORATION EXPENDITURES AND YUKON'S LAND BASE

WHAT IS THE CURRENT SITUATION?

Exploration expenditures have experienced a dramatic decline since 1997. This year's exploration spending in the Yukon is expected to be about $6 million.

Table 1



HOW DOES YUKON COMPARE TO OTHER JURISDICTIONS?

On a national level, Yukon's share of Canadian exploration expenditures has been decreasing since 1995 from 5.5% to its current estimated share of 2.4%, according to Natural Resources Canada.

Prior to 1997, Yukon attracted an average of 4.7% of Canada's exploration. This year, exploration expenditures, estimated at about $6 million, will constitute $1.3% of Canada's exploration expenditures.

Yukon represents approximately 4% of Canada's land mass. The table below shows that in times of depressed commodity prices, Yukon maintain its relative share of exploration, while in times of strong commodity prices, Yukon attracts more than a proportional share.

e.g., years . . . .

what years, specifically

D:\TEMP\Impact on Exploration $$$.doc

- Manitoba's percentage share of Canadian mineral exploration expenditures has remained constant; Manitoba has offered a strong mineral policy, secure tenure and well-regarded incentive program.

Certainty of land tenure is the second priority investment criteria. Mining industry leaders and surveys continue to point to uncertainty around land tenure as a national issue in Canada that is contributing to a flight of exploration investment to overseas countries. This view is shared by many in the minerals business in the Yukon.

WHEN DID THIS DECLINE START?

The year 1997 marked the beginning of a serious decline in world-wide exploration expenditures, driven by lower commodity prices, the Bre-X scandal and the growth of the high-tech sector.

transitioned from BC

It also marked a new era where security of mineral tenure in the context of park creation became a high-profile public issue in the Yukon. Land-use conflicts in Yukon gained profile nationally through land withdrawals to create Tombstone Park, the controversial development of the Yukon Protected Areas Strategy and the interest of Parks Canada in creating a national park in the Wolf Lake area near Teslin. Many companies, consultants, and analysts ceased recommending Yukon projects, citing uncertainty over access to land and a fear that Yukon was repeating the same events that occurred in British Columbia.

Yukon is also impacted by a significant proportional decrease in worldwide exploration investment. According to Natural Resources Canada[2]. The proportion of worldwide expenditures in Canada has fallen from 18% in 1992 to 11% in 1999. This decline is attributed to many in the industry to two factors: increased land use conflict (uncertain tenure) and improved investment climate in many other countries, creating new competition for exploration dollars. This represents an average lost opportunity cost to Yukon of $17,600 per year.

globalized economy lead to change from dual exploration budgets (domestic + overseas) to ~~glob~~ single

HOW CAN WE MEASURE THE DIRECT IMPACT OF ~~THIS~~ DECLINE DUE TO UNCERTAINTY OF TENURE?

This is not ~~likely~~ possible in a definitive way. The following comments do offer some rules of thumb to provide some clues to lost opportunities.

Assuming the literature and advice of industry leaders that certainty of tenure is the significant factor in deciding NOT to spend money in Yukon since 1997, then direct loss of exploration due to investment climate in Yukon is $12 million this year.

A collective available land base of 388,034 square kilometers attracts all of the mineral investment in recent years. This represents an expected investment of $46.39 of investment per year per square kilometre on average (without a penalty for poor investment climate)

don't understand

[2] Overview of Trends in Canadian Mineral Exploration, Canadian Intergovernmental Working Group on the Mineral Industry, 2000.

It would follow that each 1% of the land in Yukon has the potential to attract, on average, $183,000 in exploration investment per year. Write it Jessi

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