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Adding Fuel to the Fire

Saskatchewan uranium enriches warheads and the corporate pockets of free-trade supporters

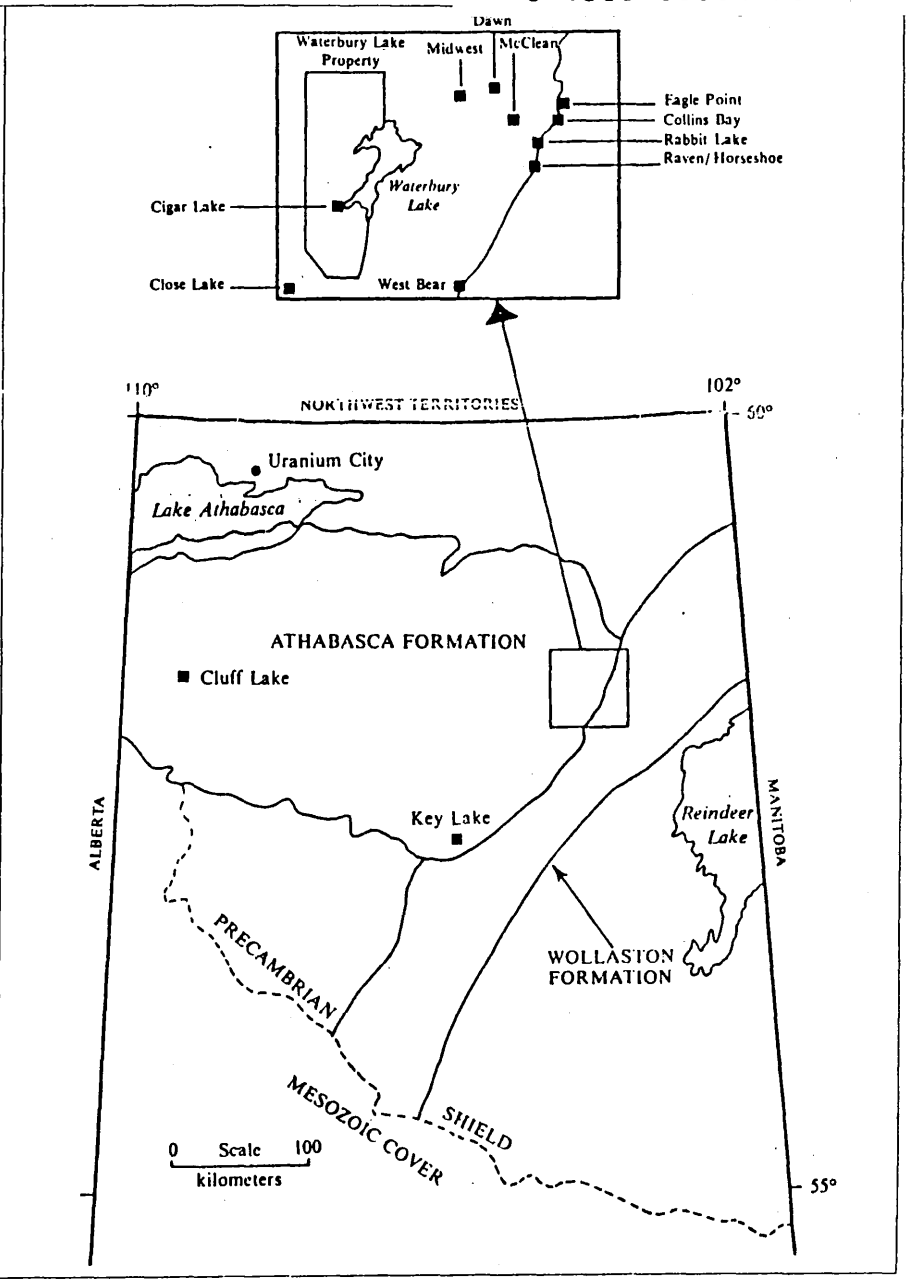
The single, twisting yellow ribbon of dust and gravel which connects central Saskatchewan with the desolate but hauntingly beautiful north-east corner of the province is no road for the faint-hearted.

The pavement on Highway 102 abruptly ends thirty miles north of the frontier town of La Ronge and never starts again. In July, a steady trickle of Winnebagos, camper trucks and chalk-coated cars topped with canoes inches northward, but most make it only to where the majestic Churchill River sweeps around a pine bluff and surges underneath the road on its way to Hudson Bay.

For those who continue another fifty miles, there is a final, bracing reminder that the road was not built for tourists.

One wall inside Mickey's dilapidated gas station and grill at McLennan Lane is covered with colour snapshots of semi-trailers, pickup trucks and ordinary cars that have been mangled or crushed beyond recognition. Some smash-ups were triggered by treacherous ice, washouts, alcohol or fatigue. But a solid majority involve vehicles that have come around blind curves and found themselves staring into the grill of one of the big eighteen-wheelers which growl down the three-hundred-mile stretch between Mickey's pumps and the northern terminus at Wollaston Lake.

The point of the display is simple. The road doesn't belong to the Chippewa Indian band which occupies a remote reservation at Wollaston Lake, the sprinkling of fishing lodges along the way, or the half-dozen families that fish and trap in the area year round.



The road belongs to the trucks.

And the trucks belong to the owners of the largest, richest uranium properties in the world. Saskatchewan's Highway 102 is the single thread which connects those properties with more than 100 nuclear facilities in Canada, the U.S., Europe and Asia. Most of them produce nuclear electricity. Some of them produce nuclear bombs. But from the beginning, the road has been a pipeline for atomic poison, profit and nuclear proliferation.

The Wollaston uranium properties in northern Saskatchewan are just beginning to put a serious dent in the global uranium supply market, but everyone in the industry knows they will likely *be* the uranium industry five years from now. They are, by every account, awesome in size and purity. Known as "elephants" to industry insiders, they have been compared to the North Sea oil reserves, and Saskatchewan has been called the Saudi Arabia of the uranium market by the business press.

This isn't just self-serving hyperbole. In fact, the reserves are so big, so rich and so easy to get at, that they are threatening to knock the world's other major producers – the U.S., Australia, South Africa, Namibia and Niger – right out of the market.

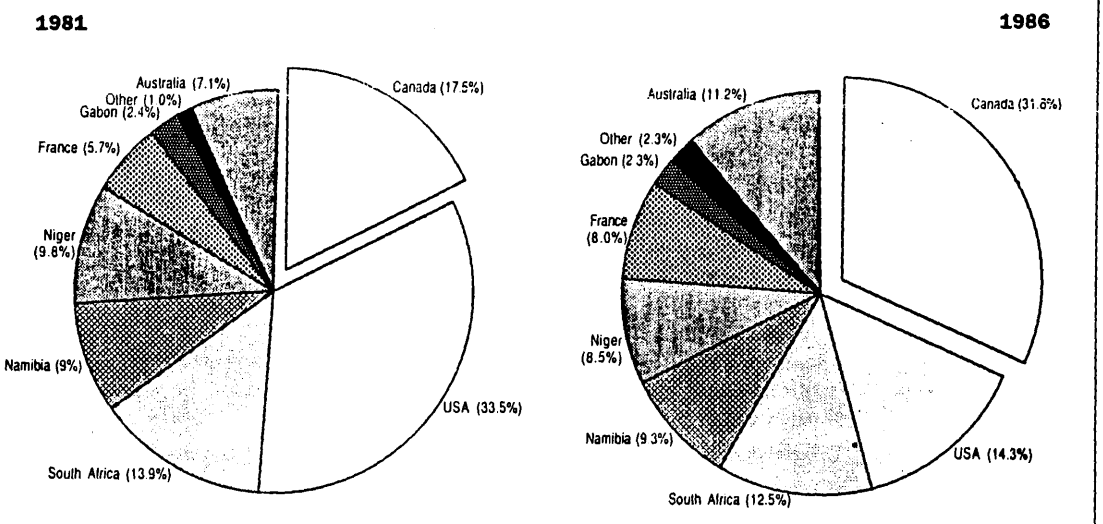
Already, two operating elephants in northwest Saskatchewan, at Kew Lake and Cluff Lake, have made the province the number one uranium producer in the world. Key Lake itself is the largest operating uranium mine in the world. Now, larger, even richer properties are being developed back near Wollaston Lake. One of them, Cigar Lake, has jolted even the Bible of the mining industry in Canada, *The Northern Miner*.

"The immensity and associated implications of Cigar Lake on the global uranium market can only be appreciated by comparing its staggering statistics with other uranium mines throughout the world." *The Northern Miner* practically gagged in a report on Saskatchewan's latest elephant. "Cigar Lake is beyond comprehension in size and grade, and will pose a serious threat to every low-grade uranium producer already struggling in a market characterized by oversupply and weak prices."

The physical statistics are irrefutable. The Cigar Lake deposit is only a city-block sized "lens" buried 425 metres beneath Athabasca sandstone, but it contains 285-million pounds of uranium at an average grade *seventy times* the world average. A further 100-million pounds at twenty times the world average concentration has been confirmed by core samples. And there are a dozen other properties within 100 miles of Cigar Lake that compare in size and purity.

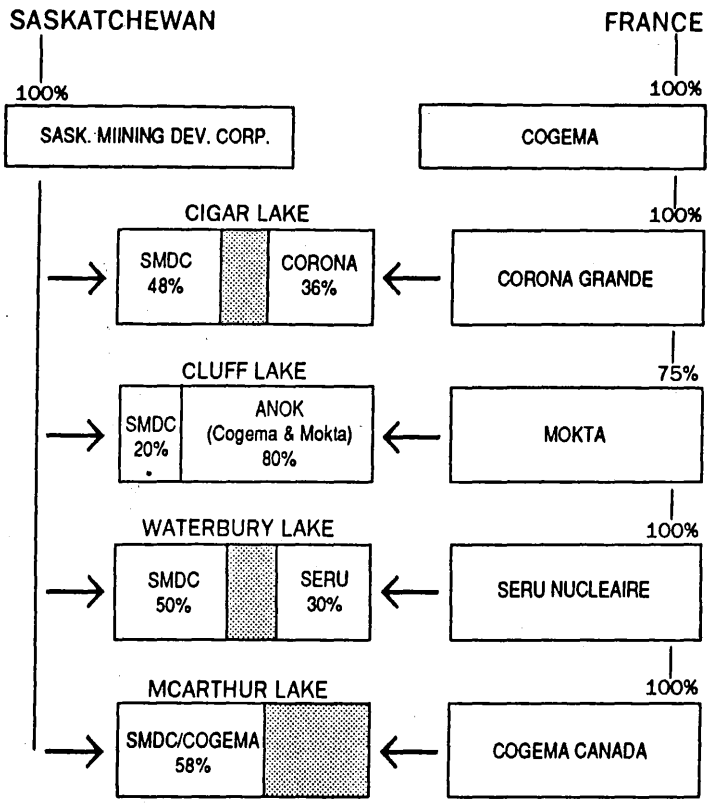
The comparative costs – and profits – of the new Saskatchewan ore bodies are no secret in the uranium industry. Since the mid-seventies, the Wollaston Lake area has been surveyed, staked, claimed and drilled almost to the last acre in a fierce drive to find more elephants.

And they have been found by a who's who of the global nuclear energy business. The net effect is that Saskatchewan has become a dominant force in the world uranium market. The provincial government has taken advantage of this trump card by demanding – and getting – a major piece of the action. Under contracts negotiated by both the former NDP Blakeney government and the current Conservative government of Grant Devine, it owns twenty per cent of Cluff



Market Share of World Uranium Production, 1981 and 1986
(Outside Soviet Bloc Areas)

PARTNERS IN URANIUM



Lake production, fifty per cent of Key Lake and Cigar Lake and major shares in most other elephants discovered so far.

In 1986, the province exported uranium valued at $477 million, and a good chunk of it involved the province-owned Saskatchewan Mining and Development Corporation (SMDC). SMDC dividends, plus corporate royalties and taxes, pumped money back into the provincial treasury. In return, the province has sweetened the pot for foreign investors with publicly financed roads, airports, support services and tax concessions. And, despite a pronounced ideological antipathy toward government involvement in business markets, Devine's Conservatives, through the SMDC, have remained central players on the world uranium stage.

Meanwhile, the federal government, through the crown corporation Eldorado Nuclear, mines the rich Collins Bay ore properties at the edge of – and under – Wollaston Lake. It also owns and operates the only uranium mill in the area, which is strategically placed to process the uranium from Cigar Lake and its satellite properties. Eldorado also owns a sixteen per cent share of Key Lake's 12.5 million pounds per year uranium production.

With these world-scale uranium assets and a seemingly rosy revenue picture on the horizon, the Devine government has found it easy to jettison its avowed devotion to classical free enterprise. It is up to its eyeballs in the uranium industry, and diverted more than eleven million dollars in public "development" dollars in 1985 alone to the French, British and West German governments to encourage more uranium investments.

It has also proven easy to ignore exactly what the Saskatchewan government's uranium partners really do for a living, and where all that uranium is really going.

For starters, Saskatchewan's major partner is the French state agency which designs and builds nuclear bombs, tests them in the Pacific despite world outrage, supplies French bombs with uranium and builds and runs military reactors which produce plutonium for the French bomb program.

Naturally, there are a few paper partners in between.

The French weapons department, the Commission d'Energie Atomique (CEA), runs an integrated, largely secret global empire of more than fifty companies which cover every aspect of the nuclear fuel cycle: uranium exploration, mining, refining, fuel fabrication, enrichment and atomic fuel reprocessing.

Besides building and testing nuclear bombs, CEA companies mine and sell apartheid uranium from South Africa-controlled Namibia, recycle plutonium for countries like Japan and West Germany and wheel and deal on the global uranium stock market – buying, selling, underselling and stockpiling uranium in a largely successful attempt to cut others out of business.

In Canada (see chart on left), the CEA operates through four corporate fronts:

•It owns 100 per cent of Cogema Canada, and seventy-five per cent of Mokta Engineering. Through Cogema and Mokta, the French government has an eighty per cent share in the entire output of the Cluff Lake mine in Saskatchewan – 2.1 million pounds of uranium last year. SMDC owns the rest;

•Through Cogema and another Cogema subsidiary, Corona Grande, France owns thirty-six per cent of the world's number one uranium prize: Cigar Lake (total reserves, 385 million pounds). Japan's largest petroleum company owns twelve per cent, the government of South Korea two per cent and SMDC owns another forty-eight per cent;

•Through another Cogema subsidiary, Seru Nucleaire, France owns one third of the rich Waterbury uranium deposit near Cigar Lake; SMDC owns half. The Cogema/SMDC team also owns fifty-eight per cent of the McArthur uranium property near Cigar Lake.

The French-owned uranium deposits in Saskatchewan have made Cogema one of the leading uranium brokers in the world. It sells to countries like Japan, Taiwan, South Korea, South Africa and West Germany, and already controls about one-fifth of the world market.

But Cogema's strategic importance has been magnified because it operates the biggest uranium enrichment complex outside the U.S. Uranium must be slightly enriched for use in most power reactors. This means all the Saskatchewan uranium handled by Cogema must flow through their enrichment complex at Pierrelatte in southern France.

There, intriguing things happen. For technical reasons, only one of every six pounds of uranium delivered from Saskatchewan to France is processed and shipped to the final utility customer; the other five pounds, called depleted uranium, are useless to electric utilities and stay on site.

But for Cogema, and its weapons-obsessed stepfather, the CEA, the depleted uranium has a very special use.

It goes directly into a military stockpile. Some is inserted into a special nuclear reactor near Lyons, where the depleted uranium becomes transformed into plutonium for the French bomb program. Some of it is put in dedicated military reactors for plutonium production. Some of it is fashioned into nuclear bomb components which double the explosive power and multiply the radioactive contaminants of bombs France is testing in the Pacific.

Technical journals and uranium industry reports confirm that Cogema makes no attempt to separate Canadian uranium from its weapons program uranium. In fact, it is technically impossible. France has refused to sign the Nuclear Non-Proliferation Treaty, and no international inspections are allowed at Pierrelatte – the point where the civilian and military atoms converge.

Nevertheless, a simple, public assurance from France that nothing nasty happens to Saskatchewan uranium has proven good enough for Grant Devine and External Affairs Minister Joe Clark. Canada has never asked for an ounce of the depleted uranium back, or demanded an accounting for it. See no evil, hear no evil.

France is not the only country which "loses" Saskatchewan uranium en route to the utilities which buy it for their reactors.

The same enrichment process happens when customers send their uranium to be enriched in the U.S. or, occasionally, Britain. The enrichment plants there are operated by the state agencies which also produce bomb materials. One pound of uranium comes out the front door, and is sent on to utilities; the other five pounds of depleted uranium goes out the back door and is stockpiled for weapons use.

In the U.S., some of the depleted uranium is transformed into plutonium for the weapons program, made into nuclear bomb components and sold to private corporations which manufacture artillery shells and armour-piercing bullets.

Since the majority of all U.S. uranium imports now come from Saskatchewan, and since the U.S. Department of Defense automatically claims all the depleted uranium not retrieved by uranium producers (Saskatchewan has never reclaimed an ounce) some of Grant Devine's depleted uranium is finding its way to:

•Nuclear Metals, Concord, Massachusetts, which produces 105 mm depleted-uranium artillery shells for the U.S. army M-1 tank program;

•Aerojet Ordnance, Tustin, California, which produces 30 mm depleted-uranium bullets for a Gatling gun which fires up to 4,000 rounds per minute when mounted on a U.S. Army Fairchild A-10 attack aircraft;

•Manufacturing Sciences, Oak Ridge, Tennessee, the largest private depleted-uranium materials plant in the world, which reworks the metal for weapons contractors. Like the above companies, it buys all its material from a single source: the U.S. enrichment plants which process mostly Canadian uranium.

The enrichment plants in the U.S. are operated by the same state agencies that produce bomb materials

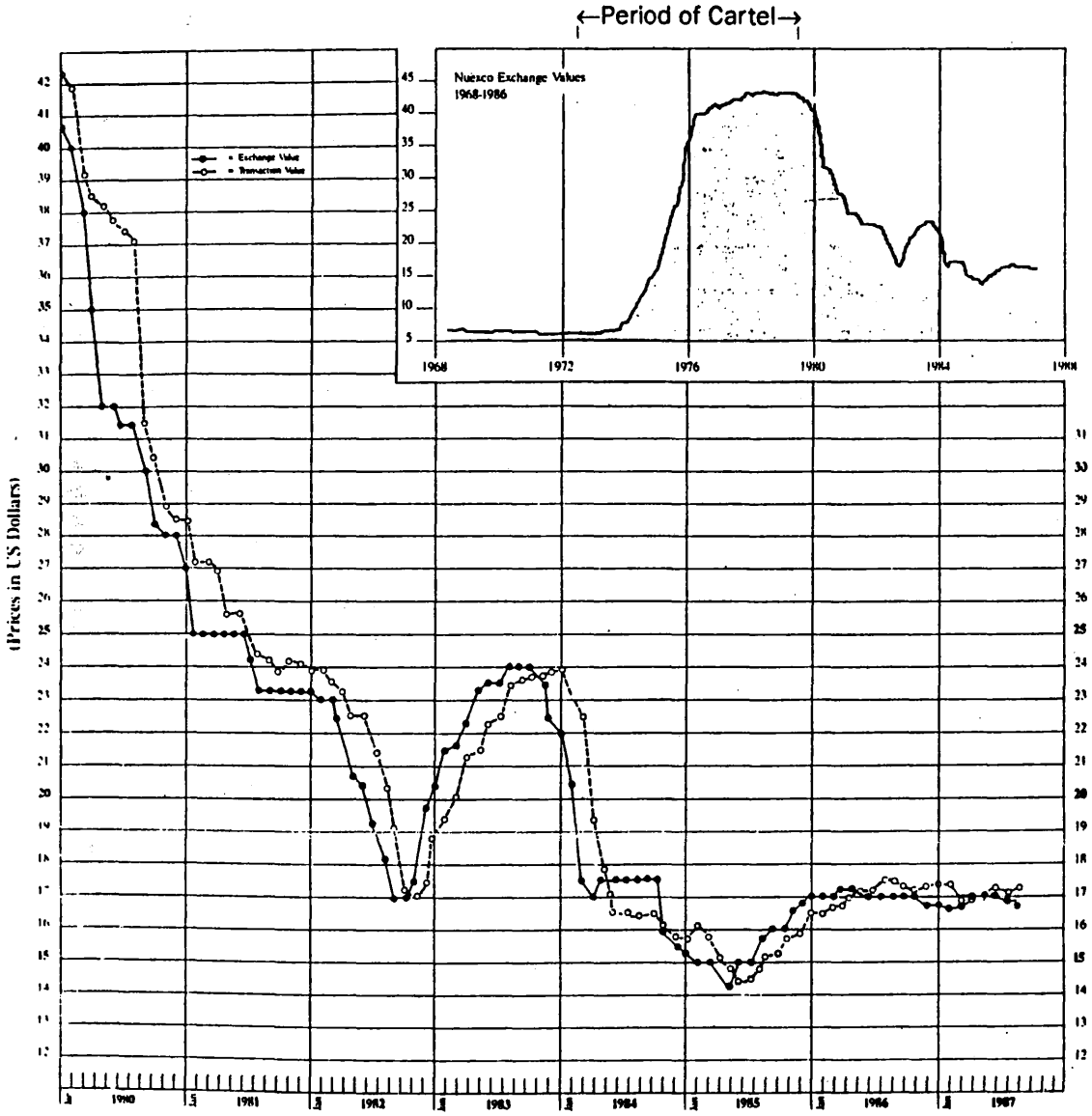
The commingling of the civilian and military atoms at the enrichment plant is no accident. Each of the major uranium enrichment plants in the world was originally built to supply enriched uranium for weapons programs, and (with the minor exception of a Dutch plant which processes one per cent of the enrichment stream) all the enrichment plants are in nuclear weapons states.

In other words, nearly every ounce of "peaceful" Canadian uranium is processed through a bomb factory before it reaches a utility; five of every six pounds stays at the bomb factory for the use of the military.

The Canadian government has known this equation since 1953, when then defence minister C.D. Howe made a personal tour of the U.S. bomb production complex – and was given explicit details on how Canadian uranium, including the depleted uranium, was made into bombs.

In 1965, Canada announced a ban on

WORLD URANIUM PRICES



all exports of uranium for military purposes – a policy still nominally in effect. But the shipments of "peaceful" uranium continued to go through the same U.S. enrichment plants, and the depleted uranium kept being stockpiled and claimed by the Department of Defense. U.S. records show that Canadian uranium accounts for most of the depleted uranium in the U.S. stockpile.

The civilian enrichment process has always been a marriage of convenience for the weapons states – the "civilian" work brings in extra cash and helps soften the image of bomb factories.

The uranium enrichers have also found themselves with a monopoly on the uranium enrichment market. Without their help, no uranium gets enriched.

That means despite the abundance of uranium for export (only fifteen per cent is used in Candu reactors), Canada is dealing from a weak hand. It is crucially dependent on the uranium enriched in nuclear weapons states, and it is they who set the terms: a stiff processing fee, the donation of depleted uranium and dutiful silence when it comes to embarrassing questions about military diversions.

Setting aside other embarrassing questions like who will take care of the millions of tons of highly radioactive mine wastes when the Saskatchewan elephants are mined out, who makes sure the utilities running Saskatchewan uranium in their reactors are safer than Chernobyl or Three Mile Island, and what will happen to the Saskatchewan uranium that is transmuted into deadly reactor wastes (South Korea, for instance, is one of Saskatchewan's biggest uranium customers, and it intends to bury its nuclear garbage in the Pacific), there is the question of profits.

On the surface, that is a plus for the industry. Without question, both the SMDC and Eldorado Nuclear are making money selling Saskatchewan uranium even in a severely depressed market which has brought the world uranium

price to less than seventeen U.S. dollars a pound and sent several uranium mines into bankruptcy (see chart on page 28).

In 1985, SMDC's total uranium sales reached $175 million, up forty-one million dollars from the year before, and sent eight million dollars back into the provincial treasury. Sales increased by thirty-three per cent. Those figures held in 1986, despite a continued slump in world uranium prices. Eldorado Nuclear had sales revenue of $202 million in 1986, much of it from Saskatchewan uranium sales.

But look a little deeper, and there is trouble on the horizon. SMDC is involved in over forty uranium and gold projects in Saskatchewan, and interest charges on those venture projects is eating net earning almost to the bone. Total world demand for uranium is also fading, and U.S. protectionist moves are threatening to cut off all uranium imports. That could leave Saskatchewan swimming in uranium, and the price plummeting even further.

For Eldorado, the picture is already desperate. Despite full order books and a full or partial interest in several rich uranium properties, the federal crown corporation is a debt-ridden dog. *Half* of its $202-million revenue in 1986 was eaten up by debt charges, and its long-term debt increased to $547 million. And, despite uranium mine and mill production increases, Eldorado's uranium operations earned nineteen million dollars less than it did in 1985. That followed Eldorado's decision to dump thousands of tons of uranium on the market – earning quick cash but driving the world price even lower.

Enter an unholy alliance of free traders and cartellers.

All the Canadian uranium industry insiders know what a U.S. embargo on uranium imports will mean. They have been there before. The largest market will be cut off, prices will plummet because of oversupply on the rest of the market, and the uranium market will crash – just like it did in the late sixties.

In response, the Trudeau government created a crown corporation to buy and stockpile Canadian uranium (Uranium Canada), thereby keeping companies artificially afloat. It set up an illegal, international cartel with France, South Africa, Australia and a host of corporate bottom feeders like Canada's Denision Mines and Rio Algom. Phoney price bids drove up the world price, soaking utilities and consumers until the cartel was exposed in 1978 (see chart on page 28). Then the price started falling again.

The insiders who set up and ran that cartel are still around. They've pulled every string to get uranium in the free trade deal – and therefore prevent another U.S. uranium embargo. Some of those names have a familiar ring.

Donald Macdonald, the former federal minister of energy who helped create the uranium cartel and blessed it with a seal of legal immunity, (including a gag law preventing journalists from publishing material about the cartel under threat of imprisonment and fines) is actively promoting the inclusion of uranium in the free trade agreement. When in power, Macdonald imposed a trade practice preventing Canadian uranium from being exported without being refined first by Eldorado – to howls of protest about protectionism from the Americans.

Now, Macdonald argues, his old policy should be scrapped in exchange for an American promise not to stop Canadian uranium imports. That quid pro quo is exactly what turned up in the fine print of the free trade package: Eldorado's privileged processing advantage gets wiped out in exchange for unrestricted access to the U.S. uranium market.

The insiders who set up and ran the illegal cartel are still around and have pulled every string to get uranium in the trade deal

Who else among the former cartellers has become a born-again free-trader?

The biggest name is Stephen Roman, the Ontario uranium czar who parlayed a penny-stake mining property and a sweetheart deal with Eldorado Nuclear to produce uranium for the U.S. weapons program in the fifties and sixties, into a billion-dollar corporate empire.

Roman's Denison Mines, which operates the huge but aging Elliot Lake mines, was the key corporate player in the Canadian end of the infamous uranium cartel in the seventies. When the market crashed because the U.S. weapons builders discovered they were temporarily awash in uranium, Roman's company first sold its unsaleable uranium to the crown-owned Uranium Canada at inflated prices. Later, Denison bought it back at cheaper prices. But business still wasn't good enough, so

Denison joined the uranium cartel, with its chief executive officer as the secretary.

Then, when the cartel prices were at their highest, Roman was awarded, by then Ontario premier Bill Davis, a $6.3 billion uranium contract to supply Ontario Hydro reactors for thirty years.

The Denison contract included guaranteed profit margins of thirty-three per cent, $600 million in interest-free advances and promises to make up the difference if another uranium producer in the Elliot Lake area ever made a higher profit than Roman. The contracts were based on the "world price" of uranium – a world price that had been jacked up by the very cartel Roman and Donald Macdonald had set up!

Ontario Hydro is now scrambling to escape that scandalous contract, and has figured out that it is cheaper to pay Roman an outrageous buy-out fee for some of the uranium, *then* replace it with Saskatchewan uranium. Roman, a self-styled rags-to-riches apostle for capitalism who twice tried and failed to get into the House of Commons as a Tory MP, has agreed to negotiate with Hydro. But, to cover all his bets, he has also just bought a sixty per cent interest in a Wollaston area uranium property holding fifty-six million pounds – with a hidden foreign partner he refuses to identify.

Naturally, Roman's latest incarnation as a free-trader fits in with his market position; he has lots of uranium to sell, and he wants access to the biggest market in the world. The U.S. currently has over 100 operating power reactors which need uranium as fuel.

Roman has plenty of friendly company. Besides Donald Macdonald and Grant Devine, he has the support of banks of bureaucrats at Energy, Mines and Resources in Ottawa, whose incest-ridden crown stepchildren include Eldorado Nuclear, Uranium Canada, the Atomic Energy Control Board and Atomic Energy of Canada Ltd. These organizations produce and market uranium, stockpile it, design and sell reactors and regulate themselves.

Adding a touch of academic polish is O.J.C. Runnalls, a professor of energy studies at the University of Toronto. A prolific writer and consultant on nuclear issues, Runnalls comes to the uranium/free trade drama with his own long list of credits: a twenty-year stint with Atomic Energy of Canada; a five-year term as VP of Uranium Canada; a current post as advisor to Nuexco – the largest uranium brokerage firm in the world; consultant to the Ontario government on the Denison/Ontario Hydro uranium contracts (he said they were a great idea); later Ontario Hydro director; and a record as the bureaucratic kingpin of the uranium cartel, which he helped set up and run in the seventies on behalf of Energy, Mines and Resources.

Runnalls qualifies as the classic old boy of the uranium fraternity.

With company like this, it is a good bet that the uranium industry got all the high-powered help it needed as the free trade talks went down to the wire. Never mind the threat of nuclear proliferation, the threat of radioactive pollution and the threat to public safety which comes with every ounce of the stuff.

When there is money to be made – even from such a hellish entity as uranium – Ottawa knows how to bend, twist, break and ignore our national laws and international treaties. It has had plenty of practice already.

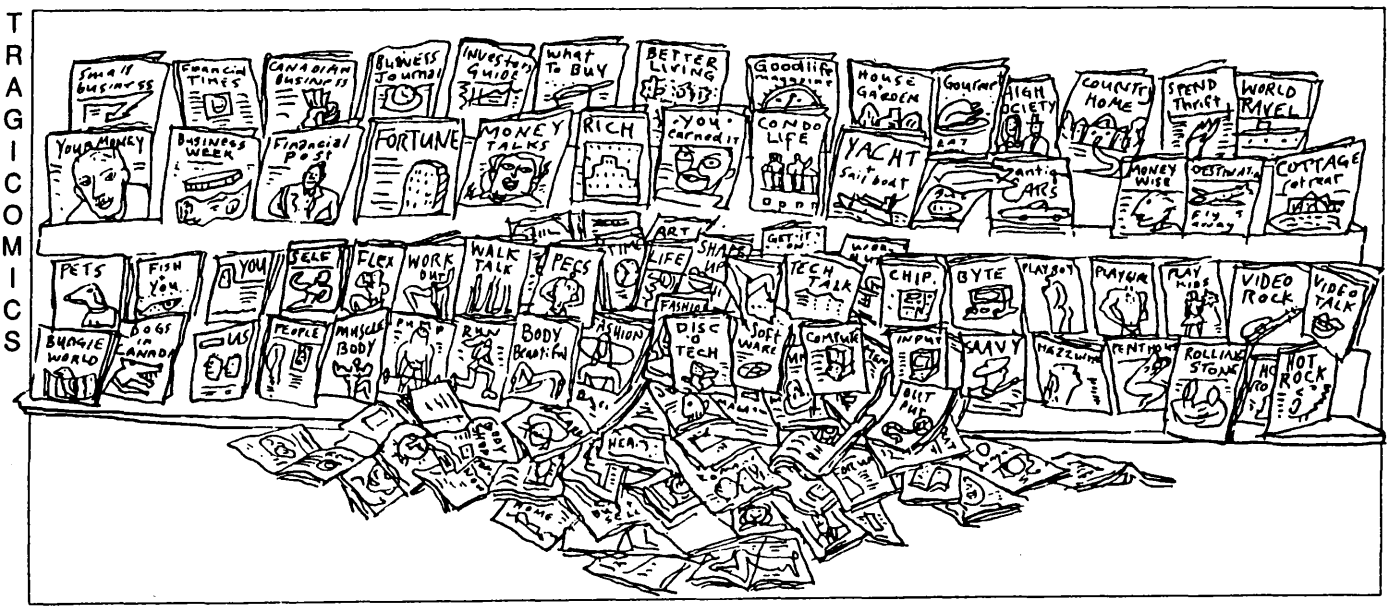
But even if the free trade deal crumbles, or the Americans – as they have already hinted – go ahead anyway and impose a uranium import embargo using the unassailable grounds of "national security," the Saskatchewan uranium industry will survive. It still owns an ace-in-the-hole: the biggest, richest and cheapest-to-mine uranium properties in the world.

If the U.S. market gets sealed off, Saskatchewan's only alternative will be to snuggle even closer to Cogema and divert all its uranium exports through Cogema's military complex at Pierrellate in France for enrichment. Five of every six pounds will remain in the depleted uranium stockpile for French military use, and the other pound will go to make electricity for utilities around the globe – and high-level radioactive poison that will remain deadly for centuries.

Under free trade, as before, Saskatchewan will continue to keep its dirty secret, and the convoys of trucks will continue to thunder down Highway 102. TM

Paul McKay is a free-lance journalist who lives in Lansdowne, Ontario and specializes in nuclear issues. He is author of The Electric Empire: the Inside Story of Ontario Hydro, *published by Between the Lines.*

TRAGICOMICS



GAIL GELTNER