

WHEN THE PEOPLE SHOUT NO!

The Friends of the Fraser Valley

and the Five Waves of Petroleum Exploration in the Fraser Valley, British Columbia

1914 – 1994



Friends of the Fraser Valley spokesman Glen Breaks and others have pledged to maintain their strong opposition to natural gas exploration in the Fraser Valley.



WATER CONTAMINATION FEARED: Gina Breaks speaks at hearings into natural gas drilling Tuesday.



JUST SAY NO spokesperson Margaret Ormiston and supporters at the Fraser Valley Gas Friends of the Fraser Valley demonstrated their opposition to gas exploration and storage at the Fraser Valley Gas Project office, Monday.



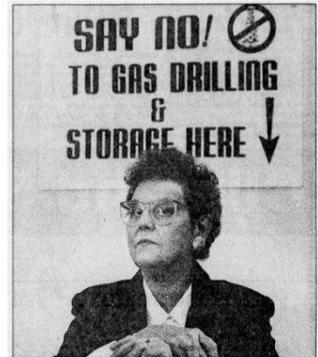
At Victoria is fervently opposed to gas drilling in Fraser Valley.



DON'T RISK YOUR HOME

SAY NO

**TO GAS DRILLING AND STORAGE
IN THE FRASER VALLEY**



LODENE CLARK: claims gas bubbling in her Illinois field.

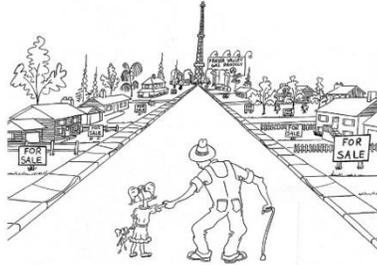


ANGRY: Local and Friends of the Fraser Valley member Charles McKee joined the Vancouver and West Vancouver's Commission on Fraser Valley Petroleum Exports on Tuesday night.

**BE INFORMED!
PROTECT
YOUR HOME.**

Gas drilling and artificial gas storage in the Fraser Valley threatens your:

- SAFETY
- WATER SUPPLY
- REAL ESTATE
- AIR QUALITY



**Friends of
the Fraser Valley**

Will Koop

August 15, 2022

B.C. Tap Water Alliance

www.bctwa.org

(Revised: August 27, 2022)

WHEN THE PEOPLE SHOUT NO!

The Friends of the Fraser Valley

and the Five Waves of Petroleum Exploration in the Fraser Valley, British Columbia

1914 – 1994

Conceived, researched, written, edited, imagery, produced, and self-funded
Will Koop
August 15, 2022

(Revised on August 27, 2022: punctuation, spelling, omissions, etc.)

© Copyright. All Rights Reserved.

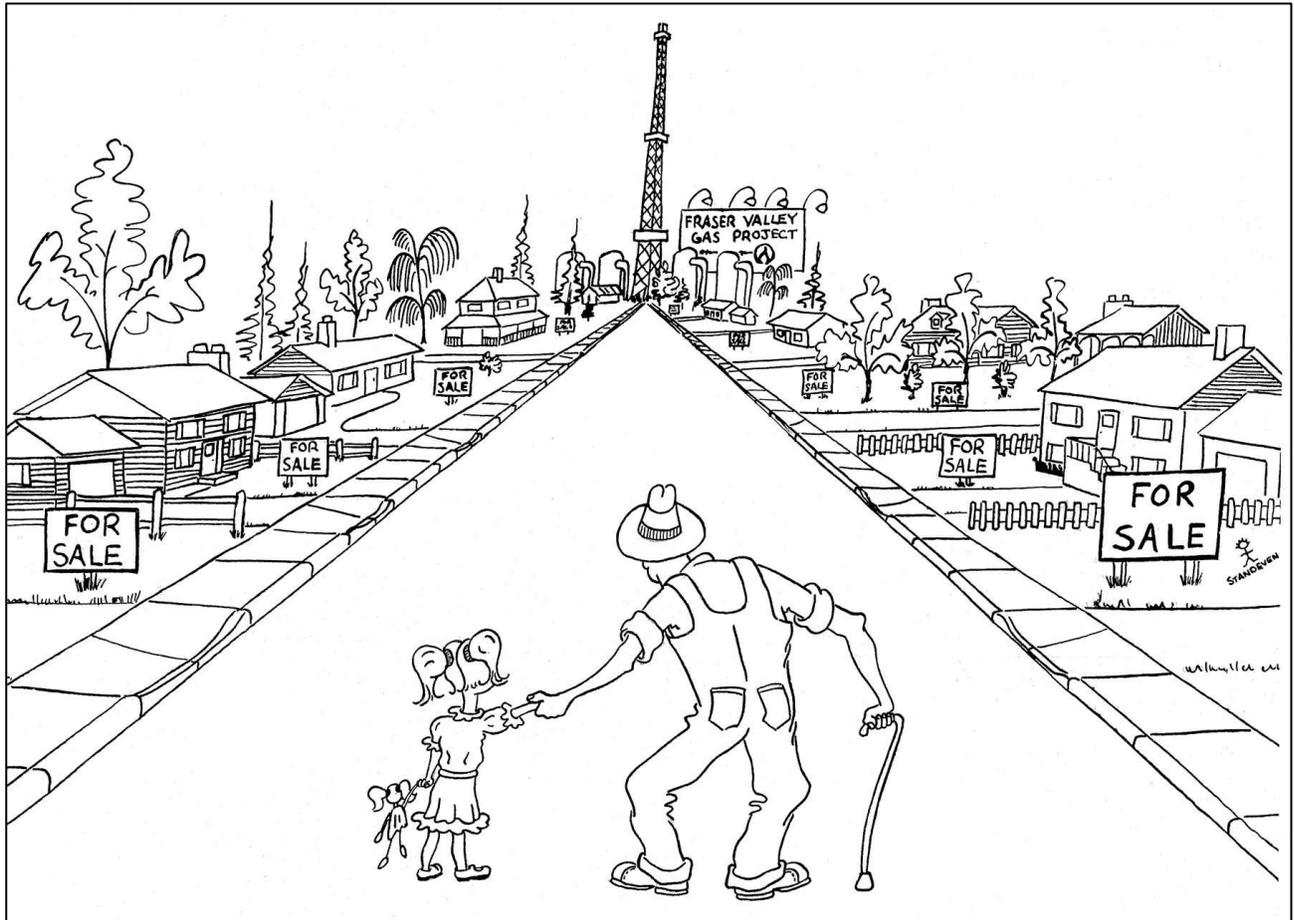
Permission is granted to copy-use images found in this report for non-profit, educational purposes only.

Self-published by William Koop on the B.C. Tap Water Alliance website: www.bctwa.org

Preface and Acknowledgements

When digitizing a box of old newspaper clippings some ten years ago, I stopped to read through a 1990 article about citizens opposing petroleum exploration in the Fraser Valley. I couldn't remember anything about the issue. Neither could colleagues of mine in Vancouver City who followed various natural resource controversies long ago. The subject had caught my eye because of my interest since February 2010 in hydraulic fracturing ('fracking') and groundwater contamination in western Canada and elsewhere (*Stop Fracking British Columbia*, within the website www.bctwa.org). Upstream petroleum development and fracking in British Columbia takes place in the northeast corner of the province, far away from the large population centres. This older controversy, however, had been at my doorstep.

The issue nagged away at me over the years until I got the ball rolling by visiting the Langley Times newspaper office on March 19, 2018. With kind permission to review old newspaper binders and without any understanding of the timelines, my ink-stained fingers stumbled across early accounts from 1981 to 1991. I photographed as much as I could. Back at home I read through the articles. That's about as far as I got, and the matter lay dormant until sometime in early 2020 when I became determined to track down Al Vickers, the former chairman of The Friends of the Fraser Valley. He was surprised that I had found him, an escapee from his past involvements and outspokenness, living now far away from the Lower Mainland, and puzzled as to why anyone would take an interest in a subject thirty years old. Unfortunately, I arrived too late, as Vickers had only a few years prior disposed of all his primary archived files, documents, videotapes, photos, etc.



Undaunted by this loss of records and information, I decided to jump in and to seriously investigate the story by December 2020. I began by interviewing Al Vickers, Margaret Ormston, Glen Breaks and Bruce Standeven (who sent me a copy of his old cartoon, shown above). Many others had already died. I travelled to Breaks' residence, who later sent me a few records, audio and video tapes. Little remained other than personal recollections of a big and serious public battle. I also made calls to the State of Illinois to track down the story of Long Point resident Lodene Clark, a person and subject of intrigue that the Friends of the Fraser Valley brought to the attention of the media and the Anderson Commission in the latter part of 1990.

With little material to examine outside of newspaper collections, I inquired about government records for the 1990-1991 David Anderson Royal Commission on petroleum exploration in the Fraser Valley. The Provincial Archives informed me in early 2021 that it didn't have the records, so I made inquiries with the Ministry of Energy which had overseen the Commission, the information office of which also later stated that those records were nowhere to be found. Baffled and stumped, I then asked the Provincial Archives to take a second look. Turns out, the B.C. Archives had the Commission records. I was informed that the records had remained in an uncatalogued and unexamined state for 27 years, and that the Ministry of Energy transferred the eleven boxes to the Archives in 1994! Curious, I later asked an archivist how many other records were in a similar uncatalogued state. Answer: almost 50,000! I couldn't believe my ears. That is an astounding figure, and a very serious problem for researchers.

I made two, four-day visits to the Archives in June and November 2021, where I digitized and made word-searchable some 10,000 pages, including the nine volumes of Commission Technical Hearing transcripts. I also made copies of the June to July 1990 audio recordings of the Commission's public hearings.

Being the first and only citizen to examine the records since 1991, ahead of me lay a daunting task to unearth and unravel the story. Glen Breaks, now in his retirement, and a key participant with the former Friends of the Fraser Valley, would become my personal guide with whom I would randomly call and ask key questions which he kindly answered.

In early assessment of the information, I decided on a draft subtitle, *The Three Waves*, to best characterize the three historical phases from the late 1970s to the early 1990s on Fraser Valley oil and gas exploration and proposals for underground gas storage. When I discovered a prior exploration wave from 1948 to

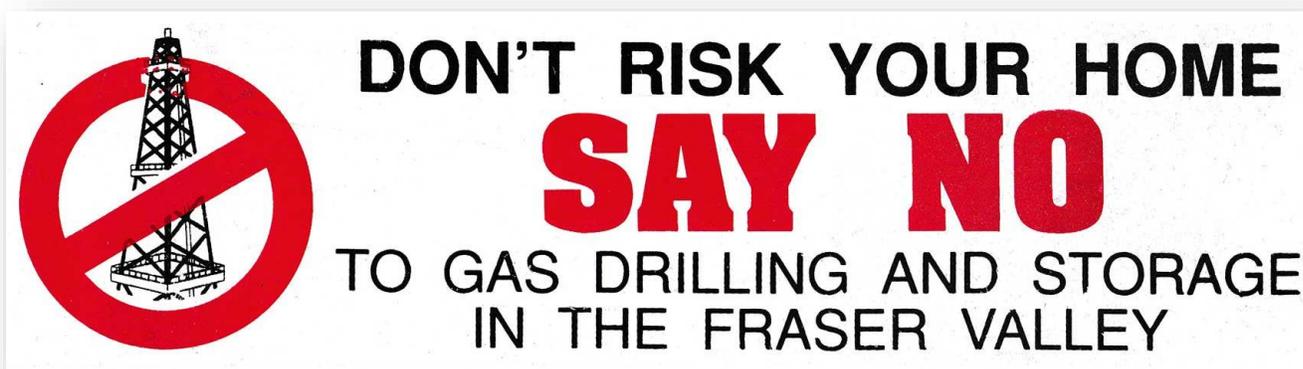


1964, causing an unexpected three-months of added research, I then changed my subtitle to *The Four Waves*. That research led to discovering yet another and originating phase from about 1914 to 1924, causing the subtitle to be finally changed to *The Five Waves*.

I discovered that I was not the only one to have characterized oil and gas exploration in the Fraser Valley as “waves.” One staff member with the Ministry of Energy, Mines and

Petroleum Resources in charge of preparing petroleum exploration information and history to the David Anderson Commission had also adopted the term, correctly referring to the “early to late 1950s” as the “second wave.”

I wish to thank Glen and Gina Breaks for their kind help and assistance, and for allowing me to stir and bring up some old, uncomfortable matters and memories. Thanks to Margaret Ormston, Al Vickers, and Bruce Standeven for their recollections.



I am grateful to The Friends of the Fraser Valley for their dedication and persistence in fighting ‘the good fight,’ for bravely taking on big petroleum and government, for protecting their families, their homes, their farms, their animals and livestock, their water, their air, and the Fraser Valley.

Will Koop,

August 13, 2020.

Dedication to Joyce Nelson

This report on petroleum exploration in the Fraser Valley is dedicated to Joyce Nelson, who recently passed away on January 4, 2022.

I first witnessed Joyce speak at the 1993 *Take Back the News* conference in Vancouver at the former Robson Square Theatre. Just before her presentation, she asked audience participants that all recording equipment be shut off, in case of legal retribution by her named sources. I reluctantly turned off my, then recently purchased, Sony Hi-8 camcorder.



TAKE BACK THE NEWS

A symposium on
**MEDIA, THE ENVIRONMENT AND
 THE PUBLIC'S RIGHT TO KNOW**

ROBSON SQUARE CONFERENCE CENTRE
 MAY 26, 1993 7:00 - 9:30 pm

PRESENTED BY SIMON FRASER UNIVERSITY'S DEPARTMENT OF COMMUNICATION AND
 THE SCHOOL OF RESOURCE AND ENVIRONMENTAL MANAGEMENT

CO-SPONSORED BY:
 Centre for Policy Research on Science and Technology (SFU), David Suzuki Foundation, Environment Canada, Environmental Educators' Association (ECTF),
 Greenpeace Canada, Institute for New Economics, Media Foundation, Sierra Club of Western Canada, Yachia Society,
 VanCity Credit Union, Western Canada Wilderness Committee, Simon Fraser Public Interest Research Group

The next time I saw Joyce was at a quarterly meeting of the B.C. Environmental Network in Gibsons in about 1996, where she gave a presentation. She showed us a corporate pamphlet somehow procured on secret plans to make British Columbia a central resource and energy switching station (oil, gas, electricity, fresh water). That riveting presentation

Symposium examines media

Nanaimo Daily
News
March 21, 1991

An array of knowledgeable speakers, panelists and workshop leaders are lined up for the fifth annual Dube Symposium this Friday and Saturday.

Each year, the Dube Symposium focuses on Canada's relationship with the Third World.

This year's symposium will focus on the theme of media and development.

It will explore the role and power of dominant media.

Keynote speakers Joyce Nelson and George Watts will kick off the symposium Friday night at the Malaspina College theatre.

Ms. Nelson, taught in the department of film studies at Queens University, before becoming a full-time freelance writer in 1976. She specializes in the politics of the mass media age. Ms. Nelson is the author of four CBC radio documentary series, numerous magazine articles and essays and four books.

Mr. Watts, president of the Nuu-Chah-Nulth tribal council, for the past 20 years, is an expert in native affairs and has international experience working with other native peoples.

The symposium's 16 workshops will cover topics including taking control of the media, global corporate agendas and media and global environment.



**JOYCE
NELSON**
... media
specialist

awakened my perceptions of the bigger global inter-corporate picture, the outlandish designs by some conniving elites to systematically dominate the earth's resource capital, no matter what the cost!

One of her books, *Sultans of Sleaze*, was pivotal in revealing for me the intrigue behind the forest industry complex hiring Burson Marstellar to influence, in part, the Vancouver Sun newspaper editorial board in 1991 following, whilst creating the B.C. Forest Alliance, which, among many other prominent characters, B.C. Liberal leader Gordon Campbell, the former Mayor of Vancouver, and later Premier, became a willing and conniving puppet. The national disgust and public anger of forest corporations' cumulative clearcutting practices, the overcutting pillage and rape of B.C.'s forests, had to be manipulated and managed by a new, comprehensive public relations strategy.

Because of the risky nature of her investigative assessments and critiques in publications, news articles and books of corporate empires and representatives, at some point Joyce had to leave British Columbia to settle elsewhere to find a means of income. Years later I tracked her down in Toronto and then maintained contact by telephone and email.

She was an amazing, important and gifted researcher, an articulate writer, a well-grounded, warm and sincere person with a wonderful voice and an alert and probing mind. I enjoyed our conversations that we shared on the plight of our planet, and about this and that. Joyce is greatly missed.

*Will Koop,
July 23, 2022.*

The following was retrieved from Joyce Nelson's obituary in the Globe and Mail.

JOYCE DOROTHY NELSON. February 24, 1945 - January 4, 2022. Joyce passed away at Michael Garron Hospital in Toronto after a brief illness. She will be greatly missed by siblings and extended family members in the USA, and many friends and colleagues across Canada. Joyce was born in the USA but had lived in Canada for many decades. Joyce was an environmental activist, cultural critic, investigative journalist and poet who produced a volume of work that can be accessed at this link <https://g.co/kgs/k8YUbc>. Joyce was also an accomplished visual artist and a member of the Beach Guild of Fine Art <https://www.beachguildoffineart.com/>. At Joyce's request her body has been donated to medical research. There will not be a memorial at this time, but donations to charities in Ontario supporting refugees or homeless people would be in line with Joyce's wishes. Joyce's brave heart will stay present with us through her work and our memories.

The following was retrieved from Joyce Nelson's website.

Joyce Nelson is an award-winning freelance writer/researcher whose seventh book was published in April 2018. Entitled *Bypassing Dystopia: Hope-filled Challenges to Corporate Rule*, the book can be ordered from [Watershed Sentinel Books](#) now.

Bypassing Dystopia is the sequel to *Beyond Banksters: Resisting the New Feudalism*, which was published in November 2016 and is now in its fourth printing. *Beyond Banksters* can also be ordered from [Watershed Sentinel](#).

Nelson's previous books include: *The Perfect Machine: TV in the Nuclear Age*; *The Colonized Eye: Rethinking the Grierson Legend*; *Sultans of Sleaze: Public Relations & The Media*; *Sign Crimes/Roadkill*:

From Mediascape to Landscape; and *Seeing in the Dark* (poetry). She has written hundreds of articles and essays published in a wide range of magazines, newspapers and websites. Her written work has been anthologized in ten books published in both Canada and the U.S.

Nelson was given an award for her writing by the Vancouver Island Human Rights Society and on three occasions her articles have been selected by Project Censored Canada (now NewsWatch Canada) for their Top Ten “significant but under-reported” stories of the year.

In addition, Nelson has created 23 hours of radio documentary for CBC Ideas, all of which were re-broadcast by popular demand, and she won 2nd Prize for Radio Drama in the CBC Literary Competition. She has also taught at Queen's University and the University of Victoria.

Nelson writes regularly for [The Watershed Sentinel](#), [Counterpunch](#), and other publications. She is also a visual artist and member of the [Beach Guild of Fine Art](#) in Toronto, Canada.

The following was retrieved from the website, [rabble.ca](#)

In memoriam: Joyce Nelson, by [Kim Elliott](#) January 13, 2022

Nelson was a long-time and stellar contributor to [rabble.ca](#) — never more so than over the past year when she turned her attention to the climate emergency, exposing the dangerous liaisons between corporate interests and elements of the green economy.

It is with great sadness that the *rabble.ca* community mourns the loss of author and [rabble](#) contributor, [Joyce Nelson](#), who passed away in hospital following an illness last week in Toronto.

Nelson was the author of seven books and many hundreds of articles and essays published by a variety of magazines and websites—including *The Watershed Sentinel* and the Canadian Centre for Policy Alternatives. Over her more than 30 years as a full-time writer, Nelson’s work appeared in at least 25 book-length anthologies published in Canada and the United States. She also created 23 hours of radio documentaries for *CBC Ideas*, all re-broadcast by popular demand. A sought-after speaker, she lectured at locales as diverse as the Banff Centre for the Arts and Harvard University. Joyce taught at Queen’s University and the University of Victoria. She was also an artist and fiction writer, as can be gleaned on her [website](#).



Nelson was a long-time and stellar contributor to [rabble.ca](#)— never more so than over the past year when she turned her attention to the climate emergency. Nelson exposed the dangerous liaisons between corporate interests and elements of the green economy, and Canada’s role in the world, in pieces on such diverse issues as [Tech workers challenge the giants who employ them](#), [Big Plastic’s trashy lawsuit](#), [Canada’s ancient forests are being turned into toilet paper](#), and [Sri Lanka shipping disaster and Canadian consumerism](#).

Nelson never shied away from human rights, challenging the media for its reporting on [Gaza in a piece published last spring](#). However, the topics she focused on most were [the environmental impact of military spending](#) and [the risk posed by nuclear reactors](#).

Her final piece, published in November 2021, addressed [the terrible paradox of green energy transition](#), where she warned, “The metals and minerals needed to conduct this transition will result in a drastic increase in environmentally dirty mining. The global energy transition is perhaps more red than green after all.”

For many, Nelson is best known for her book [Beyond Banksters: Resisting the New Feudalism](#). Published in 2016, *Beyond Banksters* has been described by Gordon Laxer as “a hard-hitting, well-researched, fast-paced exposure of the usually hidden world of Canadian and international banks.” Joel Bakan described it as “a powerful and chilling investigation into an emerging global oligarchy of banks and corporations.”

The late journalist [Ed Finn’s review](#) perhaps best summarized Nelson’s style:

“Over the course of my 70-plus years as a journalist, I’ve reviewed hundreds of books, many of them informative and educational. But Joyce Nelson’s *Beyond Banksters*, which I’ve just finished reading, is not only the most enlightening book I’ve ever reviewed, but by far the most challenging. It’s not that it’s difficult to read. Far from it. Joyce is renowned for both the clarity of her prose and for her meticulous research, both of which are on display in this, her latest blockbuster. The challenge it poses to a prospective reviewer is that its succinct 164 pages are jam-packed with vital facts, figures, insights and revelations. So many that it’s impossible to adequately summarize it in a standard book review.”

We encourage everyone to read and share Joyce Nelson’s work. We know her wonderful writing and commentary will continue to be an important part of Canadian critical thinking and writing. Joyce will be greatly missed. Our deepest condolences to her family, friends and community.

Table of Contents

Preface and Acknowledgements	i
Dedication: Joyce Nelson	iv
Table of Contents	viii
Introduction and Summary	1
The First Wave	9
The Second Wave (Part One)	18
The Lulu Island ‘Gusher’	19
Durland and the Surrey Dome Well	21
The Birch Bay Syndicate	23
Van-Tor Oils	24
Schemes that Paved the Way	27
W.C. Mainwaring	29
Mainwaring’s Pieces of the Action	33
Royalite in the Gulf Islands	35
Charter Oil in the Gulf Islands	37
Allenbee in the Fraser Valley	38
Mainwaring in the Applications Line-Up	40
Petroleum Permit Maps	41
The “All-Canadian” B.C. Petroleum Pipelines Push	43
The Mainwaring Modest Mansion	58
The Second Wave (Part Two)	62
Kris Petroleums Ltd.	62
Hazelmere Farmer’s Pool	63
Key Oil & Gas in Abbotsford	64
R.H. Stanfield in Chilliwack	66
Empire Oil: Cooking the Books	71
Richfield Oil’s Entry and Tar Sands Extravaganza	74
The Rise of Van-Tor and Mainwaring’s Hunt for Underground Gas Storage	78
Richfield Oil Enters the Fraser Valley	84
Richfield in Abbotsford	87
Richfield in South Surrey	87
Richfield in Tsawwassen	88
Can-American Petroleums	92
W.C. Mainwaring’s Bold Empire-Building Move	96
1958 Directors of the Peace River Power Development Co. Ltd.	125
Added Directors of the Peace River Power Development Co. Ltd., 1959-1960	133
The Third Wave: B.C. Hydro Gas Group’s South Surrey Underground Gas Storage Project Proposal	137

The Fourth Wave: Fraser Valley Exploration, LNG Proposals, and Deregulation, 1981-1984	157
4-1. Hydro’s LNG Proposals: Rejected	168
4-2. The Privatization / Deregulation of B.C.’s Natural Gas	180
4-3. Prelude to the Fifth Wave: Petroleum Exploration on Vancouver Island	201
Shaken and Stirred	202
Give Us Gas	207
British Petroleum’s Two Wells	210
The Fifth Wave: Fraser Valley Petroleum Exploration, the Methane Storage Revival, and the Rise of The Friends of the Fraser Valley	218
5-1. Enter Dynamic Oil	223
5-2. Enter the Big Players	231
5-3. The Transformation of Inland Natural Gas Company to “B.C. Gas Inc.”: The New Giant Player	235
5-4. Seismic Exploration Begins	241
5-5. Provincial Government’s ‘Consultation’ with Third-Order Governments	246
5-6. The October 26, 1989, Bidding Process Results	257
5-7. “Public Consultation”	265
5-8. ‘Natural’ Gas: The Friendly Energy Source Propaganda	270
5-9. No Foes: Then Came the Friends of the Fraser Valley	278
Margaret and Charles	281
5-10. D-Day, March 5, 1990	285
5-11. Out of the Closet and into the Limelight	303
5-12. The Public Inquiry Begins	313
“Who is this Man?” (1962-1975)	316
The Anderson Commission	327
5-13. The Friends Dig In	339
5-14. The NIMBY (Not in My Back Yard) Sticky Label	343
5-15. The Public Hearing Series: the Tuesday, June 12th Opener.....	349
5-16. After the First Hearing	372
5-17. Eight of the Nine Public Hearings	375
5-18. July 11, 1990: The Final Public Hearing	382
5-19. The Big Lie about Storage	416
5-20. The Travelling Anderson Commission	424
John Ahern	425
13 Sites	430
5-20-1. North America	430
Calgary	430
The Jackson Prairie Visit (June 28-29)	431
The Oregon Mist Tour (July 18-19)	432
Fort St. John Tour (July 20)	433
The Los Angeles, California Tour (July 23-24)	434
The Michigan-Williamsburg-Kalakaska Tour (July 25)	435
The Ontario Tour (July 26-27)	437
5-20-2. The Vacation Trip to Europe	438
The Tour de France (August 12 to 17)	439
The Trip to Italy (August 15)	444

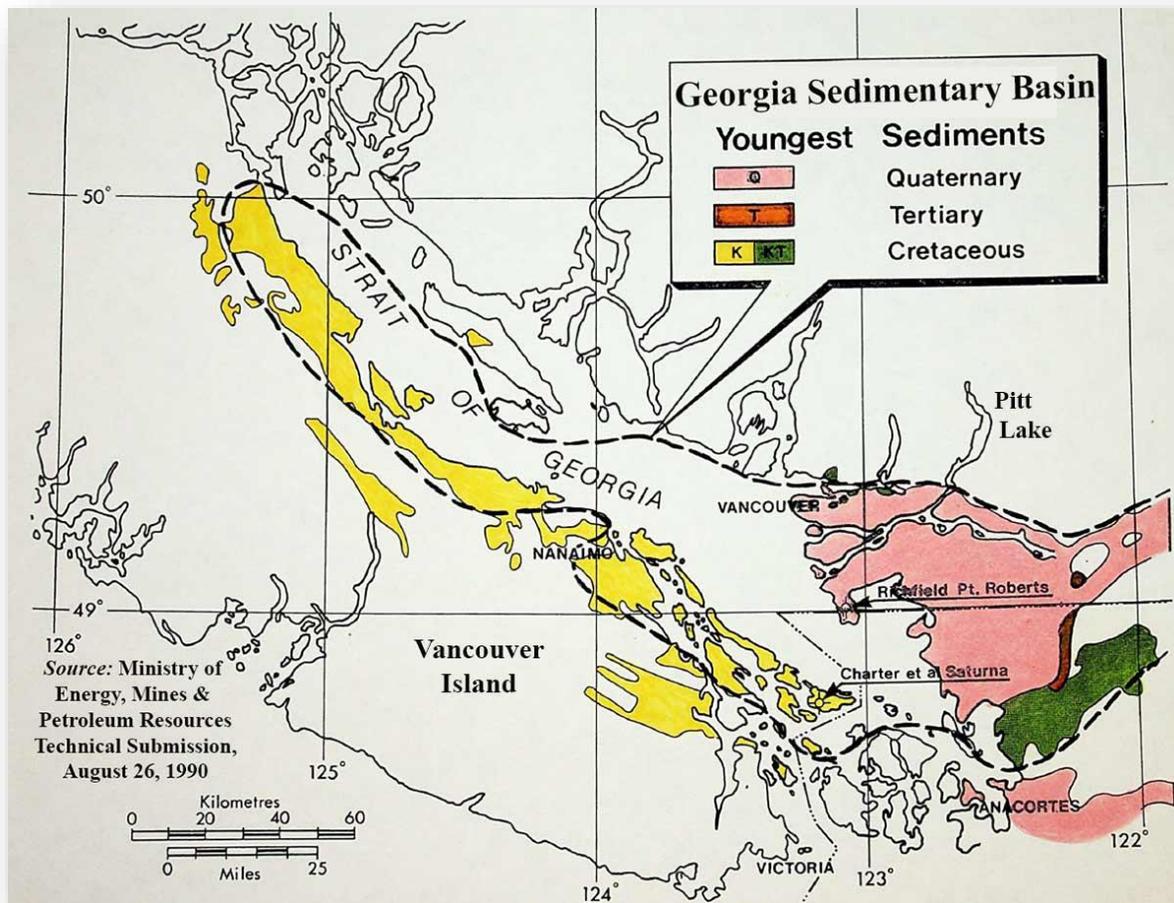
Back to France (August 16 to 17)	446
The Trip to the United Kingdom (August 24)	446
The Shaping of Commissioner Anderson’s Bias	451
5-21. The Rzepczynski (Population Proximity) Affair	452
The Friends’ Boycott of the Anderson Commission	475
The Commissioner and Counsel Declare War on The Friends	485
5-22. Anderson’s and MacAdams’ Special Trip to Illinois	494
Missouri	504
Indiana	504
Gas Migration	505
The American Gas Association Paper	509
5-23. The October 22 Hearing	516
The Morning Of	521
The Letter	523
The Witnesses	525
Judgement	528
The Allegations Report	529
5-24. The November 27 Langley High School Meeting	533
Al Vickers	537
Margaret Ormston	544
Lodene Clark	546
Brian Calder	554
Jack Hamilton	557
Charles MacLean	559
5-25. ‘Time will Tell ...’ Illinois: Forty Years After the AGA Position Paper	561
5-26. The Complaints to The Law Society of B.C.	584
5-27. Anderson’s Final Report and Government’s Decision to Quash	
Underground Storage	595
5-28. Provocateurs: The Ferndale Jump-Start Consortium.....	610
5-29. The Battle Continues and Finally Ends: 1991 – 1994	615
5-29-1. The Final Year of the Socreds	617
5-29-2. 1992	626
5-29-3. 1993	632
5-29-4. The Final Two Drilling Sites	639
5-29-5. The Final Storage Foray	642
Appendix A: Transcript of Margaret Ormston’s July 9, 1990, Oral Presentation at the David Anderson Royal Commission Public Hearing in Chilliwack (Transcribed from a Commission audio tape)	644
Appendix B: Transcript of Al Vickers’ July 9, 1990, Oral Presentation at the David Anderson Royal Commission Public Hearing in Chilliwack (Transcribed from a Commission audio tape)	656
Appendix C: Glen Breaks’ ‘Three of the Thirteen Pages’ of Notes Presented to the Anderson Commission	661

Appendix D: Gina Breaks' September 4, 1990, Oral Presentation on Boycotting of the David Anderson Commission (From the Commission's Technical Proceedings' Transcripts) 664

Appendix E: Information Lists of Anderson Commission Public Hearings, Preparatory and Technical Meetings 671

Introduction and Summary

Many readers may be surprised to learn that there were oil and gas well operations in British Columbia's Fraser Valley and Lower Mainland areas, within valley-bottom lands from the Town of Chilliwack westward to the municipalities of Metro Vancouver alongside the Strait of Georgia. There were also drilling projects on some Gulf Islands in the southern half of the Georgia Strait and on adjacent lands on eastern Vancouver Island. These programs were licensed through the blessings of the provincial government, in a geologic zone identified as the Georgia Sedimentary Basin.



Terrestrial seismic studies were later conducted from 1977 through to 1989 – technical evaluations for determining and mapping underground geologic structures – which fiercely shook up or vibrated lands in the Fraser Valley and east Vancouver Island by specialized, highly powered diesel trucks.

Almost all these ventures occurred within what this report refers to as “the five waves” of petroleum exploration:

- 1914 to 1924 – Richmond area, Burnaby, Pitt Meadows, Abbotsford
- 1940s to 1964 – Richmond, Delta, Surrey, Abbotsford, Gulf Islands
- 1977 to 1979 – Surrey, Delta, Langley
- 1981 to 1986 – Lower Mainland, Fraser Valley, east Vancouver Island
- 1989 to 1994 – Delta, Langley, and Aldergrove

The five waves occurred within periods of unprecedented industrial expansionism, the transformation of 'undeveloped' lands by networks of entrepreneurial, colonial business empires, the multi-development of inter-connected urban centres within the continent of North America.

Described in Chapter Two, the 1950s was perhaps the most intense period, when gas and oil pipeline connectors were constructed to strategically link up the new industrial realms. And it was within the last three waves that public concerns and opposition became more pronounced in southwestern British Columbia, particularly the final wave, the focus of this report, when citizenry organized and shouted No!

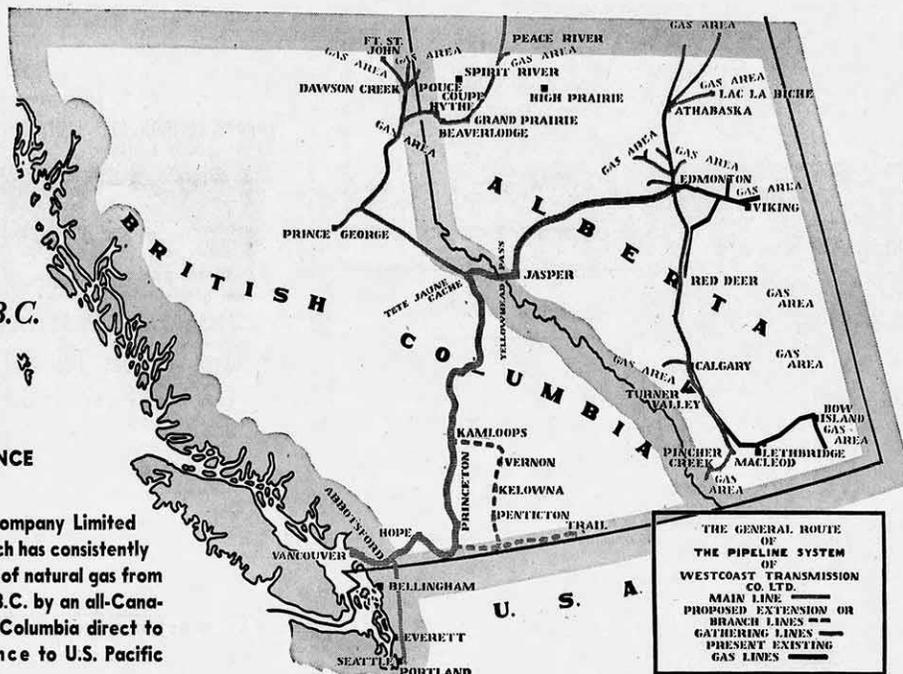
Organizers of: **WESTCOAST TRANSMISSION COMPANY**
LIMITED

- Presently:
- A leading Independent Oil Producer in Alberta
 - Developing over 1,000,000 acres in the Peace River District of B.C.
 - Planning drilling operations on the B.C. Gulf Islands

It will mean to B.C.

- NEW PAYROLLS
- NEW INDUSTRIES
- NEW ECONOMY
- NEW TOWNS
- DOMESTIC CONVENIENCE

Westcoast Transmission Company Limited is the only organization which has consistently sponsored the transmission of natural gas from Alberta and northeastern B.C. by an all-Canadian route through British Columbia direct to Vancouver, B.C. and thence to U.S. Pacific Coast cities.



Pacific Petroleum Ltd.

A Company committed to the search for and development of oil and natural gas in Western Canada

EXECUTIVE OFFICE
304 Toronto General Trusts Bldg.,
Calgary, Alta.

REGISTERED OFFICE
504 Seymour Street,
Vancouver, B.C.

FIELD OFFICE
9616-101A Avenue,
Edmonton, Alta.

Vancouver Sun, March 28, 1950

In the 1950s, the B.C. Electric Company, a former private sector provincial utility corporation and a subsidiary of the Power Corporation of Canada, sought to find an underground gas storage facility in the Lower Mainland / Fraser Valley. The proposal occurred during the investor-frenzied and speculative petroleum rush in western Canada to harness the spoils from northeast B.C. and northwest Alberta by way of new provincial and federally approved oil and gas pipeline corridors to the metropolitan Lower Mainland and other export market destinations in northwestern United States.

In this rush, B.C. Electric's corporate directors proposed to store methane from Westcoast Transmission Company's new 800-mile natural gas pipeline that was completed in 1957. After years of promotional tests, B.C. Electric's subsidiaries failed to find a functional underground storage site in both the Fraser Valley and just across the American border within northwest Washington State.

North America's, and the world's, first underground methane storage facility was established in southern Ontario in 1915, a storage method quickly adopted by the petroleum downstream delivery sector in the United States. By 1980, there were some 400 underground storage facilities in the U.S.A., most of which were in the American northeast. The big storage companies, however, encountered problems. Some of the facilities were leaking, because the artificially-induced pressurized gas was making its way back upwards – 'migrating' – through corridor cracks in the underground 'caprock.' This of course created problems for inhabitants on the surface – the migrating gas contaminating drinking water, poisoning agricultural crops, and posing dangerous explosive risks to building structures. Such were the experiences of some.

Many of these 'problems' went unreported and were covered up by industry, with most professionals in the storage business simply towing the 'company and industry line.' Some admitted there were problems, and those that did often stated that the risks were worth the trouble. It wasn't until 1993 that an academic, peer-reviewed paper published in the January 11, 1993, edition of the Journal of Petroleum Science and Engineering frankly and reluctantly admitted there were gas migration problems associated with storage developments in proximity to population centres.

In the 1970s, when B.C. Electric's successor, B.C. Hydro and Power Authority (B.C. Hydro), began efforts a second time to locate an underground storage site in the western half of the Fraser Valley, the public corporation now ran into trouble (Chapter 3). Its consultants raised the red flag of groundwater contamination, linking concerns about exploration drilling to gas migration. With a population boom underway in the municipality of Surrey, municipal council opposed both seismic surveys and the proposal in its territory.

After government rejected the underground proposal, B.C. Hydro soon sought an alternative. It proposed to construct a Liquefied Natural Gas (LNG) storage facility at the east end of the Burrard Inlet, just next door to the municipalities of Anmore and Port Moody (Chapter 4). The public and the media quickly raised legitimate concerns about the dangers associated with LNG storage, shutting down Hydro's proposal once again.



By the second half of the 1980s, and with the emergence of new provincial Energy Minister Jack Davis, a big friend of big business, he gifted the Fraser Valley to industry for petroleum exploration and underground gas storage (Chapter 5, 5-1, 5-7). The matter would incite acrimonious public opposition, despite the findings from Dynamic Oil Ltd.'s consulting firm which conducted two sociological profile reports in the municipal regions of Surrey and Langley. Dynamic's consultants advised that although the probability of public revolt was not remote it was not projected to be a significant problem (Chapter 5-7). The opposite occurred, with the birth of The Friends of the Fraser Valley in February 1990 (Chapter 5-9). The Friends, a mix of professional, talented and concerned volunteer citizenry, quickly influenced local municipalities to oppose both drilling and storage. Over time, the organization grew to over 2,000 members.

Valley gas hunt on

The Province
 By Brian Lewis
 Business Reporter
 Friday, October 27, 1989

High hopes for major find

Because of that, the companies will be looking for a large underground gas storage site in these Fraser Valley parcels. Such a site could be filled with cheaper, summer-produced natural gas to supplement winter use.

"Storage is something on everybody's mind since this basin is so close to a big market," says Canadian Hunter executive vice-president Jim Gray. "But the key is to find gas and this is a high-risk area."

Canadian Hunter and B.C. Gas drilled an unsuccessful well at Birch Bay in 1967.

Tipton says he hopes to have the first well drilled within the year and says he doesn't anticipate problems drilling in populated areas, although special steps, such as using electric-powered rigs to cut noise, may be used.

Yesterday's sale culminated an initial two years of seismic exploration throughout the Fraser Valley, in which more than 500 kilometres of line were shot.

There hasn't been a well sunk in the area since 1963.

Conoco also has a joint-venture agreement with Vancouver-based Dynamic Oil Ltd., which has been active in the area for some time.

Conoco bought more than half the rights sold and paid just over \$5 million.

That price included a whopping \$3.1 million for a 3,310-hectare section near Matsqui, which topped the October sale at \$950 per hectare. By comparison, the top price in the same sale in B.C.'s traditional north-eastern gas fields was \$516 per hectare.

B.C. Gas Inc. led a partnership, which includes Calgary-based Canadian Hunter Exploration Ltd., in purchasing a 2,612-hectare property near Aldergrove for \$355,572.

Todd Tipton, Conoco vice-president of exploration, says all the companies must negotiate surface access rights with the landowners.

If commercial quantities of gas are found, the government will collect royalties on production since mineral rights are owned by the Crown. A landowner would likely receive some benefit from production as well, he says.

"We feel the Fraser Valley Basin is extremely unexplored and has very good potential for natural gas, but not oil," he said. "So we're after gas to supply Greater Vancouver."

The Lower Mainland's gas is now transported about 1,400 kilometres by the Westcoast Energy Inc. pipeline from north-eastern B.C.

Extra B.C. gas is also stored underground in Washington state to meet Greater Vancouver's high-demand winter period.

Fraser Valley gas rights sold

Staff map by Nick Murphy

This public opposition, which originated and quickly grew in the municipalities of Langley and Aldergrove, swayed the two Langley provincial riding politicians who were also Social Credit Party Cabinet members. Premier Bill Vander Zalm's administration then ordered the Ministry of Energy to immediately conduct a Public Inquiry on petroleum exploration in the Fraser Valley. The Friends remained suspicious of government's intentions, stating that its Commission Inquiry was a stalling tactic, merely a formal procedure through which it would nevertheless grant the big nod to petroleum exploration and gas storage.

David Anderson was appointed Commissioner in May 1990 (Chapter 5-12) who was contracted to complete a final report by the end of September 1990. Anderson, a former staff member with Canada's External Affairs department (1962-1967), a former federal Liberal Party Member of Parliament (1968-1972), and former elected head of the B.C. provincial Liberal Party (1972-1975), ran into 'problems,' delaying the release of his final report on February 1, 1991, four long and agonizing months beyond his contracted deadline.

As the Inquiry began, one of the two petroleum industry consortiums, the partners being B.C. Gas Inc., Conoco Canada Ltd., and Dynamic Oil Ltd., adopted the name Fraser Valley Gas Project. The consortium initiated a public relations campaign and opened a 'community' office. A member of that consortium, B.C. Gas Inc., a company formerly called Inland Gas with most of its previous utility operations in B.C.'s Interior, played a central role in pushing for drilling and underground gas storage. B.C. Gas, now with numerous subsidiaries, had recently acquired B.C. Hydro's Gas Division in 1988 (part of the Social Credit government's controversial policy for privatization of public assets), by offering the highest recorded purchase for a public utility in North America.

Glen Breaks, a volunteer core member of The Friends of the Fraser Valley, began researching the technical literature of the petroleum industry. He retrieved information on environmental impacts and repercussions of upstream petroleum development and downstream underground gas storage in the United States. His findings, alongside research findings from other Friends' volunteers, helped to critically challenge the Fraser Valley Gas Project, the Anderson Commission, the B.C. Utilities Commission, and the Ministry of Energy, Mines and Petroleum. The Friends did so relentlessly through newspaper articles and letters to the editor, in television news

Natural gas is a friend of the environment.



All Canadians, including corporations, are far more aware of our fragile environment than ever before. And that's where natural gas can help. It's the cleanest burning fossil fuel known.

Natural gas produces less carbon dioxide than coal or oil and produces fewer emissions into the atmosphere helping to moderate the greenhouse effect.

Many of us depend on natural gas for everyday living. We use it for home heat, hot water, cooking, swimming pools, clothes dryers and automobile fuel. Natural gas is safe, economical and is a natural friend of the environment.

The growing population in the Lower Mainland is creating a need to find local sources of natural gas and storage areas.

By tapping the natural gas potential of the Fraser Valley we can have safe, reliable and economical supplies into the future. And we can enjoy these benefits without harm to the local environment or any adverse effect on our quality of life.

Gas exploration has little environmental impact

Contrary to what you may have heard, drill sites have little environmental impact. The working area and drill rigs are cleared and dismantled within six weeks, and the land is quickly restored to its natural state.

During drilling, underground water quality is protected by advanced pollution control practices...

the same practices which have allowed the drilling of 7,300 oil and gas wells in northeastern B.C. without a single reported instance of water contamination.

Visual impact is minor

In the event that natural gas is discovered, the visual impact on the landscape is negligible. The only surface evidence of the well would be a small shed which covers the capped above-ground pipe. All transmission pipes would be underground and out of sight.

Underground storage safe and proven

Underground storage of natural gas is being successfully practiced at more than 400 sites in Canada and the U.S.A. It's a safe and proven way to ensure natural gas supplies during periods of peak demand. At present, we're partially dependent on supplies stored underground in Washington State... a situation which could result in future shortages for the Lower Mainland.

Visit our Aldergrove* information office

If you have any questions about natural gas drilling or storage, drop in to our Consumer Information Centre at Aldergrove Centre Mall, 3100-272nd Street in Aldergrove. Or phone 856-8144 Monday to Friday.

By ensuring reliable supplies of clean-burning natural gas and using it in our daily lives, we are all helping to preserve B.C.'s environment.

Natural gas is indeed a friend of the environment.

*After May 7th.

The Fraser Valley Gas Project



BC Gas Naturally.



Langley Advance
April 25, 1990

The Fraser Valley Gas Project

Answering the most frequently asked questions about natural gas exploration.

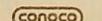
Working with communities is an important part of natural gas exploration. The Fraser Valley Gas Project believes that a better understanding of local and environmental concerns will assist everyone in making the right decisions. The following are the most frequently asked questions about the project.

Q Is gas exploration likely to contaminate groundwater?

A No. To prevent contamination, we use a special double-hulled pipe system with a 100 ft. long outer protective steel casing pipe and a 1,500 ft. long inner pipe through which the drill passes. Both pipes are also separately encased in cement to a depth of 1,500 ft. to ensure that any drilling exploration is completely isolated from exposure to groundwater. This is the same system used in northeastern B.C., where over 7,000 gas wells have been drilled without a single reported case of groundwater contamination. To verify the absence of contamination, all water wells close to Fraser Valley drill sites will be tested before and after drilling.



BC Gas Naturally.



coverage, and with public donations that paid for newspaper advertisements, public demonstrations, public meetings and forums. And they persisted by raising concerns during the Commission's public hearings and technical meetings.

In August 1990, B.C. Gas, its legal firm, and its American consultant, played hardball with Glen Breaks' research information, his reputation, and his engineering American informant (Chapter 5-21). That's when things began to get ugly. Breaks' key findings were based on information linking the dangers of leaking gas from underground storage to proximity of population centres which he weaned from top American reservoir engineering experts and literature. His findings were a direct threat to B.C. Gas's interests, findings that otherwise contradicted the petroleum consortium's repeated assurances to the public.

Breaks' industry informant suddenly recanted, leaving him and The Friends in the lurch. This occurred during the middle of the Commission's Preparatory Technical Sessions (August 13 to 25), and just prior to the Commission's Technical Hearings (August 27 to September 6). On the evening of September 4, two days before the last Technical Hearing, The Friends announced in front of the Commissioner's Hearing assembly, and with the media in tow, that their organization was officially abstaining and boycotting the Commission, a direct result of the consortium leaning on their academic informant.

Commissioner Anderson and Commission counsel Douglas MacAdams were privately furious! Because of the accusation by the Friends, they suspended the Commission Inquiry after the September 6, 1990, Technical Hearing and obtained government approval and funding for a separate quasi-legal sub-Inquiry into Allegations of Witness Tampering, delaying the Commission's responsibilities by two extra months! They declared war on The Friends.

The boycott caught media attention, and shortly thereafter information was published in the newspapers about an American woman in the State of Illinois, Lodene Clark, another of Glen Breaks' research informants,

~~CONFIDENTIAL~~
JULY 11, 1990 *Rec'd Sept 4*
- Glen

My name is Glen Breaks.

I've been researching natural gas engineering and in particular, the underground storage of natural gas, for several months now. My primary source of information has been a book, published in 1990, entitled "Natural Gas Engineering, Production and Storage" by Dr. Donald Katz and Robert L. Lee. Dr. Katz, who passed away in 1989, was a professor of chemical engineering at the University of Michigan and a retired consulting engineer. He was co-author of 250 papers and several books, and over the years received 17 national honours and awards. He was awarded the National Medal of Science from President Ronald Reagan in 1983. He pioneered many of the techniques and concepts now commonly used in the natural gas storage industry. To discredit Dr. Katz would be to discredit the entire petroleum industry.

In the chapter on monitoring and safety, Dr. Katz tells us that given the expected 30 to 50 year lifetime of a storage facility it is foolhardy, to say as B.C. Gas has repeatedly said, that leakage into the local user's water supply and homes will not occur. He also recommends that a policy of acquisition of surface lands above gas storage zones be followed, in order to reduce and control hazards due to leakage. The consortium at the Jackson Prairie facility are now following this 1990 recommendation.

Dr. Katz gives this advice to anyone currently operating a storage field with residences on it. Any land in the storage area that enters the market through the normal course of events might then be procured, especially if there are any residences near.

He goes on to describe the type of home that should be built above a storage facility, if such an activity is unavoidable. He states "it would be preferable to have the homes on concrete pads without basements, and this new type of construction might well be advised in the gas storage areas."

**Inquiry
labelled
'whitewash'**

Chilliwack
Progress
September 12, 1990

by Al Irwin,
MetroValley News

The commission of inquiry into gas exploration in the Fraser Valley was denounced last week as a "whitewash" by the Friends of the Fraser Valley.

The Friends, a group of valley residents concerned about the impact of exploration proposals by The Fraser Valley Gas Project, walked out of technical hearings of the Commission on Fraser Valley Petroleum Exploration, at Langley Conference Centre, Sept. 4.

Friends member Gina Breaks said her group would boycott further commission hearings because the group is convinced the process is biased in favor of the Gas Project, a consortium of B.C. Gas, Conoco and Dynamic Oil Ltd.

who's farmland, home, groundwater, and outbuildings in Long Point, Illinois, were surrounded by leaking, migrating gas from underground storage, leaking, in fact, since the 1960s (Chapter 5-21, 5-24). This was the same American State that Breaks' expert informant operated in, the same State that The Friends warned the Commission about gas migration and liability issues before David Anderson's July 1990 special tour of underground storage sites in the United States, a State Anderson subsequently failed to visit and make formal inquiries about (Chapter 5-20). Thirty years later, an Illinois television station, WCIA 03, investigated Nicor Gas Company's leaking gas storage facilities (Chapter 5-25).

The air explodes around her home

The air is known to explode on occasion around Lodene Clark's property in Livingston County, Illinois.

Safety hazards, bad water and other concerns prompted the 62-year-old grandmother to fly out to the Fraser Valley late last year to tell residents about her problems with natural gas.

"I'm not an activist. I'm an old farm wife with two years of college. . . I'm willing to tell my story because I know what these gas companies are saying. I know there's another side of the story."

Clark owns a house on top of one of North America's largest underground gas storage areas. The problem is that the gas reservoir leaks.

Clark first noticed the situation soon after storage began more than 20 years ago.

"In 1968, when this field was first going into operation, the well boiled. You could see the water boiling down there like a tea kettle would boil," Clark said in a

telephone interview.

"The well got to be very bad quality water — almost undrinkable. It became so vile you couldn't even wash clothes in it."

Gas began seeping through the ground and conditions got so bad that Clark began battling with the Northern Illinois Gas company. She got little satisfaction.

"They told me it was native gas (coming out of the well) and none of their concern.

"We used to put a vented pipe on it and actually burn it to embarrass the gas company.

But the gas company was difficult to spur into action. Company officials would sympathize with Clark, but

always insisted it was gas native to the area that was seeping out, not gas they were storing, Clark says.

Company officials began digging shallow holes around her property in the 1970s.

By this time gas was leaking so badly that her son

would flip a match in each hole as he went out for his evening jog. He could navigate his way back to the house by the burning holes.

It was proven in 1989 that it was definitely stored gas leaking, but the troubles didn't end there.

"They plugged the holes. Then fissures in the land opened up. The fissures would boil," she says.

Unfortunately for Clark, one of those fissures is under the house where her son now lives.

"Gas coming up and releasing into the surface is not ideal but it's not overly harmful.

But if it collected in a basement it would explode. If you dropped a match down the concrete well it would explode and blow the concrete cap off," Clark says.

That very thing did happen to one of her neighbors, she says.

His pump house got covered with a heavy wet snow one time when he was on vacation. The snow sealed seeping

gas in the building. When he got back from vacation he turned on the taps, which caused the pump to kick in.

The resulting explosion blew the boards off the building and through the windshield of his car, Clark says.

Commissioner David Anderson visited Clark in her home recently as part of his commission of inquiry into gas exploration and storage in the Fraser Valley. But the meeting didn't go well.

"I felt I was able to tell him some of the things that have happened to me. He didn't call me a liar but almost."

Clark wants to settle with the gas company. Among other things, she wants a new farm to replace her 80-acre operation.

Until she gets what she wants, she says the battle will continue.

"The potential for someone being killed is very high," she says.

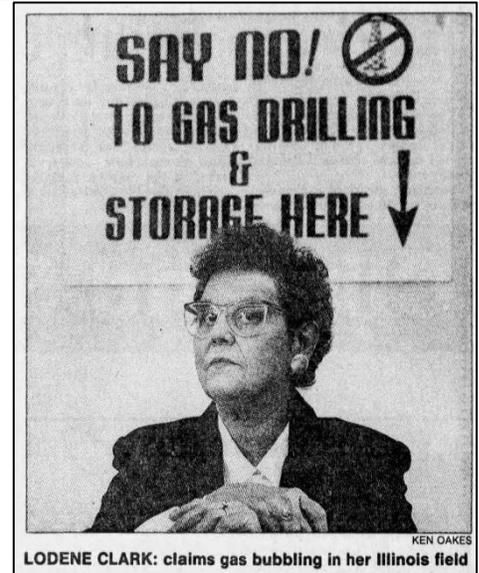
Chilliwack Progress - February 6, 1991

As the focus of Commission attention shifted toward the State of Illinois, Commissioner Anderson and counsel Douglas MacAdams made a special visitation to Illinois just before the Commission's Allegations Hearing on October 22. There, the duo privately met with Glen Break's professional reservoir engineer informant, Walter Rzepczynski (Chapter 5-23), who later sent the Commission a lengthy affidavit.

The Friends refused to participate in the October 22 special Allegations Hearing. At that Hearing, Commissioner Anderson ruled that there was no evidence of 'hanky panky' by anyone from industry, government or the private sector upon the Illinois engineer. Anderson one-sidedly concluded that the Friends had fabricated the information and misled the public. However, the media would remain unconvinced of the Commission's Allegations rulings.

The Commission's harsh and retaliatory Allegations Inquiry rulings failed to deter The Friends. Two things resulted. Glen Breaks filed a complaint with the Law Society of B.C. against Commission counsel Douglas MacAdams, which included a complaint of misconduct involving defamation (Chapter 5-26). Secondly, the Friends organized a large public meeting on November 27, 1990, which over 600 people attended (Chapter 5-24). At the energetic meeting/rally, the Friends denounced the Commission, and Lodene Clark from Illinois, who the Friends invited for the occasion, spoke about her tribulations of leaking gas. Her testimony made the media headlines.

The Commission eventually released its final report On February 1, 1991, in which Commissioner Anderson gave his blessings for exploration drilling and gas storage (Chapter 5-27). Revealed at the end of Chapter 5-20, in sub-section *The Shaping of Commissioner Anderson's Bias*, the Commission's final



LODENE CLARK: claims gas bubbling in her Illinois field

report admitted that Anderson had already made up his mind favoring gas storage prior to the Technical Hearings that began on August 27.

On the very same day, and moments after the Commission's February 1st news release, Energy Minister Jack Davis issued a single sentence news release: "there would be NO DRILLING FOR UNDERGROUND GAS STORAGE in the Fraser Valley." Because of an impending provincial election, compounded by intense public pressure against drilling and storage, government countered Commissioner Anderson's storage recommendation.

In mid-1991, three months before the provincial election, new Social Credit Energy Minister Jack Weisgerber announced his approval of a demonstration exploration drilling site in the municipality of east Delta (Chapter 5-29). The company released the drilling results in early October 1991, two weeks before the provincial election. As was the case with all previous exploration drilling operations in the Lower Mainland and Fraser Valley over the previous eighty years, the petroleum consortium came up 'dry' – no gas, no oil.

Under a new NDP administration, Energy Minister Anne Edwards announced in August 1992 her approval for the drilling of two more exploration sites in the municipalities of Langley and Aldergrove. As The Friends and politicians noted, in 1991, prior to the provincial election, NDP's Premier Mike Harcourt promised the voters "a moratorium on natural gas exploration and storage in the Fraser Valley." The two wells were eventually drilled in 1993, after the consortium made an agreement with a new drilling partner, Stateside Energy Corp. Once again, both results came up dry.

In April 1994, the Ministry of Energy released a discussion paper which included recommendations to rule out future gas storage proposals in the Fraser Valley. The information was summarized in an April 20, 1994, Abbotsford News article, *Gas storage ruled out – 'Friends' gain victory in a long battle:*

Underground storage of natural gas has been permanently ruled out in Langley. The decision was made in a discussion paper on the supply and deliverability of natural gas, prepared by the Ministry of Energy, Mines and Petroleum Resources.

Drilling for gas was vigorously fought by the 2,000 strong Friends of the Fraser Valley group which was formed four years ago. One of the Friends' prime incentives to fight drilling was their contention that the true agenda of a consortium of companies was to store natural gas in the ground, not to drill for it, as they contended, to meet growing demand for the fuel.

That storage was the real itinerary of Conoco Canada, Dynamic Oil and Stateside Energy Ltd. is reinforced by the ministry's paper. The paper noted that the companies drilled three wells in the Lower Mainland, two in Langley. It said: "Although the drilling target was natural gas, it was evident from the drilling results in the Langley area that there was insufficient caprock material to provide an effective storage seal, with the result that this area can not be considered prospective either for natural gas, or by extension, for underground gas storage."

Pat Lawrence, a member of the Friends, called the ruling "the most appropriate and intelligent decision considering all the information we gathered from around the world."