

THE UNIVERSITY OF CALGARY

Turner Valley Oilfield Development

1914-1945

by

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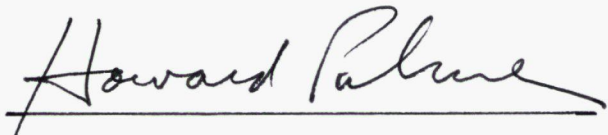
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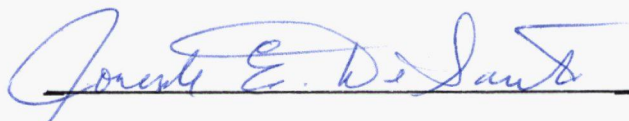
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ABSTRACT

The study of the development of petroleum in Alberta is only beginning and to date no analysis has been made of the affect of this process on Alberta's first major oilfield community at Turner Valley. This thesis will attempt to document some of the numerous forces which, as a group, combined to make the oilfield culture unique. Economic and political forces vied for control and created an oilfield whose direction of development was dictated by the exploitation of the resource for the profit of these exogenous forces. As a result, the oilfield workplace, workforce, economy and culture were all influenced by the norms of the larger North American economy and society, regardless of their relevance to the local social and economic needs. The Turner Valley oilfield stood largely apart from isolated, single-industry and single-employer resource communities of its day, anticipating more recent resource communities where every aspect of economic and social development reflected larger North American community values.

ACKNOWLEDGEMENTS

I feel compelled to express my appreciation to many people but even more to what they signify. For me, the educational process has been a journey through various religious and boarding schools, conventional campus-based universities and the special attention afforded by the tutors of an extension institution, Athabasca University. At each, special educators took an interest in my pursuit of knowledge, truth and discernment while they directed, coaxed or prodded me in new directions. Among others, these include Trudy Kutz, Bob Wright, Dr. J.A. Toews, Dr. John Klassen, Dr. Douglas Frank, Dr. Alvin Finkel, Dr. David McGinnis and my supervisor for this work, Dr. A.W. Rasporich. To these people I am deeply indebted and I express my sincere thanks.

The idea for this thesis came from the experience of living for ten years in Venezuela, a country whose being has been profoundly altered by the exploitation of its petroleum resources. This study of the changes a development process effects on a social setting received additional direction during a brief period of employment doing historical research for the town of Turner Valley. As this juncture, I met Doug Cass and our mutual interest in Alberta's petroleum history has afforded us many hours of interesting discussion and some conjecture. Research has been accomplished only with the unstinting assistance of Catherine Myhr, Lindsay Moir, Doug Cass, Bill McKee, Eric Gormley and other librarians and archivists at the Glenbow-Alberta Institute

and their most accommodating counterparts at the Provincial Archives of Alberta.

Finally, I thank my considerate spouse, Jeanne, for ignoring the tedious details of my research while honestly catching some of my enthusiasm for this study.

TABLE OF CONTENTS

TITLE	i
SIGNATURES.	ii
ABSTRACT	iii
ACKNOWLEDGEMENTS	iv
TABLE OF CONTENTS	vi
LIST OF ILLUSTRATIONS AND APPENDICES	vii
INTRODUCTION	1
CHAPTER ONE:	
EXTERNAL FORCES AND DEMOGRAPHIC DEVELOPMENT	8
Economic forces	15
Institutional forces	23
Demographic developments	34
CHAPTER TWO:	
INDUSTRY, TECHNOLOGY AND LABOUR, 1914-1940	51
Transportation System	52
Technological linkages	59
Refining and pipelines	64
Labour Conditions	72
CHAPTER THREE:	
SOCIO-ECONOMIC DEVELOPMENT OF THE OILFIELD	
COMMUNITIES, 1929-1945	103
Transportation and settlement	105
Living conditions	117
Institutions and social life	131
CONCLUSION	165
BIBLIOGRAPHY	169

LIST OF TABLES AND APPENDICES

Illustration	1.1	Geological cross-section	9
	1.2	Geological cross-section	10
	1.3	Map of settlements	14
	1.4	Map of townships	35
	1.5	Chart showing population growth. . .	36
	1.6	Graph showing township growth. . .	37
	1.7	Graph showing community growth . .	38
	1.8	Employees in petroleum industry. . .	40
	1.9	Origin of immigrants to the area . .	42
Illustration	2.1	Government income from the oilfield and amount expended on local roads .	54
	2.2	Employment by oil and gas sector compared with Royalite	73
	2.3	Workmen's Compensation Rates	88
	2.4	Injuries reported to WCB	90
	2.5	Royalite employees	92
Illustration	3.1	Map of oilfield communities.	106
Appendix A		Workplace deaths or injuries	173
Appendix B		Serious or deadly gas accidents. . .	176

INTRODUCTION

The petroleum industry, relatively modern when compared with other energy industries, boasts a considerable amount of attention in a variety of media. Once it outgrew its infancy approximately one hundred years ago and began to take on an increasingly powerful political and economic role, the petroleum industry attracted attention from powerful economic forces in our modern world. As was to be expected, the media perspective covering the industry varied from the intensely self-serving oil company public relations magazines or news releases, to the largely unbiased scientific journals and the sometimes highly critical scrutiny of various political or economic observers. Reporting done concurrently with petroleum exploits by various newspapers, journals and government agencies is useful to historians as they attempt to glean facts about, and the opinions of, the players involved in the events. But with the distance of historical perspective, a more academic literature is now beginning to emerge. As with contemporaneous records, the historical account can also be unbiased, critical or self-serving. This new body of literature has examined various aspects of the petroleum development process. General overviews have provided a study of the broad sweep of the Canadian events from individual, corporate and academic perspectives.¹

Technical reviews in mining and petroleum journals have analyzed the developments in geological and geophysical theory which have affected the industry.² The machinations of governments, corporations and individual promoters are also coming under increased scrutiny by academics and journalists.³ In spite of their institutional ties, corporate histories add another body of knowledge to the recorded history of petroleum exploitation.⁴ Most recently, technical, service and supply associations have commissioned their own accounts of the history of the industry.⁵ Finally, various local and oral histories as well as fictional accounts and academic treatises have shed light on some aspects of oilfield mythology and the social history of oilfield life.⁶

Since the Canadian petroleum industry as a whole has only begun to receive serious attention from the academic community, it is hardly surprising that the study of western Canada's first oilfield has received sparse analysis. To date, the body of literature on the history of the Turner Valley oilfield has mostly emanated from corporate or governmental offices. A comparison of western and central Canadian newspaper accounts of the development of this oilfield also indicates regional biases. At the university level, three academic works have attempted to analyze one aspect or another of the development process at Turner Valley. The first thesis, written by Daniel Istvanffy in 1950 at the University of Alberta and titled "Turner Valley:

Its Relationship to the Development of Alberta's Oil Industry" was an early attempt to cover as many aspects as possible of the exploitation of the oilfield. Its tone is mostly factual and the Alberta government statistician gave a brief and largely uncritical summary of production, legislation and conservation as they applied to the field. The next work, dated 1978 by Llewellyn May Jones at the University of Calgary, was called "The Search for Hydrocarbons: Petroleum and Natural Gas in Western Canada, 1883-1947." As indicated by the title, the broad study of some sixty-five years of petroleum history allowed little room for critical primary-source study or analysis but provided a basis for other work. Most recently, "Investment in the Alberta Petroleum Industry, 1912-1930" by Douglas Cass at the University of Calgary in 1985, has added an impressive new study of individual and corporate players. Although it details the rise of nearly all such investors in Alberta to 1930, chapters on international investment, the companies involved in the Turner Valley oilfield, and a history of the Calgary Stock Exchange and security regulation for these early years provide exhaustive details and analysis of some important aspects of the economic development of the Turner Valley oilfield.

Into this limited collection of works on Turner Valley oilfield development enters the present study. It must, of course, develop new themes and provide fresh evidence upon which to base its analysis and conclusions. And it will

bear some resemblance to previous works simply because the basis for study and some of the sources are the same. In contrast to these previous works, this study attempts to link developmental forces with the specific aspects of the exploitation process and show how this combination produced a unique oilfield culture.

The forces which create a social environment are often so numerous as to defy enumeration. The Turner Valley oilfield is one such complex case. First of all, ancient mountain-building geological forces created a petroleum reservoir deep beneath the Rocky Mountain foothills a few miles from Calgary. Once hints of the area's potential became common knowledge, numerous political and economic institutions began to show interest in the new oilfield. Next, economic investors saw the potential for amassing fortunes and small and large, local and international parties alike vied for economic rewards. Political forces interested in controlling this oilfield included British, American and Canadian federal governments as well as provincial, municipal and local jurisdictions. With such diverse attention being paid to this oilfield, it comes as no surprise that immigrants from other parts of Canada, the United States and Britain flocked to the area. The combined influence of these various forces consequently affected the development of the life in the Turner Valley oilfield.

The first aspect of oilfield life discussed in this work is the workplace. Transportation systems, always

important to a resource extraction area, reflected the various influences of numerous political and economic forces. Oilfield technology, production techniques, refining and distribution systems, and labour organizations all reflect this oilfield's relationship to numerous complex forces. The second aspect of oilfield life, the social and economic development of the community at large, was also affected by larger economic forces. Just as they affected working conditions, transportation systems were also pivotal in directing the settlement patterns of the various organized and less permanent communities. Living conditions, community institutions and social life similarly reflected the tensions promoted by these external forces.

This study of the various forces which together created the economy, society and culture in the Turner Valley oilfield community is partly based upon the previously mentioned academic studies. It also relies on the increasing body of material relating to this oilfield which has recently been made accessible. Notably, a recent local history provides a large amount of new information in the largely unedited and anecdote-filled format common to the genre. The Calgary oilpress and daily newspapers were also carefully examined and the previously unstudied local oilfield press from the late 1920s to the 1940s was also examined in its entirety. Numerous government records collections at the Provincial Archives of Alberta and individual and corporate collections at the Glenbow Archives

were perused for additional information. And finally, the rich experience of working for the town of Turner Valley and the informal oral history which was passed on to the author from oilfield residents were invaluable to this study.

While detailed examination of an oilfield community is not yet common in either academic or popular literature, any attempt to identify and analyze the many complex factors which direct the development process may be based on just such a study.

FOOTNOTES - INTRODUCTION

¹ See George de Mille, Oil in Canada West: The Early Years (Calgary: Northwest Printing, 1969), Eric J. Hanson, Dynamic Decade: The Evolution and effects of the Oil Industry in Alberta (Toronto: McClelland and Stewart, 1958), Earle Gray, The Great Canadian Oil Patch (Toronto: McClelland and Stewart, 1982).

² See, for example, the bulletins and journals of the American Association of Petroleum Geologists, Alberta and Canadian Society of Petroleum Geologists, Canadian Society of Exploration Geophysicists, Society of Exploration Geophysicists and the Canadian Institute of Mining and Metallurgy among others.

³ These include Peter Foster, Other People's Money: The banks, the government and Dome (Toronto: Collins, 1983), Earle Gray, The Wildcatters: The Story of Pacific Petroleum and Westcoast Transmission (Toronto: McClelland and Stewart, 1982), John Richards and Larry Pratt, Prairie Capitalism: Power and Influence in the New West (Toronto: McClelland and Stewart, 1979).

⁴ Two good examples are Philip Smith, The Treasure Seekers: The Men Who Built Home Oil (Toronto: MacMillan, 1978), Peter Foster, From Rigs to Riches: The Story of Bow Valley Industries Ltd. (Calgary: Bow Valley Industries Ltd., 1985).

⁵ For example, Fred Stenson, Waste to Wealth: A History of Gas Processing in Canada (Calgary: Canadian Gas Processors' Association and Canadian Gas Processors' Suppliers' Association, 1985).

⁶ Some which proved helpful in this study included, Sheep River Historical Society, In the Light of the Flares: The History of the Turner Valley Oilfield (Turner Valley: Sheep River Historical Society, 1979), Petroleum Industry Oral History Project tapes, outlines and selected transcripts at the archives of the Glenbow-Alberta Institute, Calgary, J.D. House, The Last of the Free Enterprisers: The Oilmen of Calgary (Toronto: MacMillan, 1980).

CHAPTER ONE

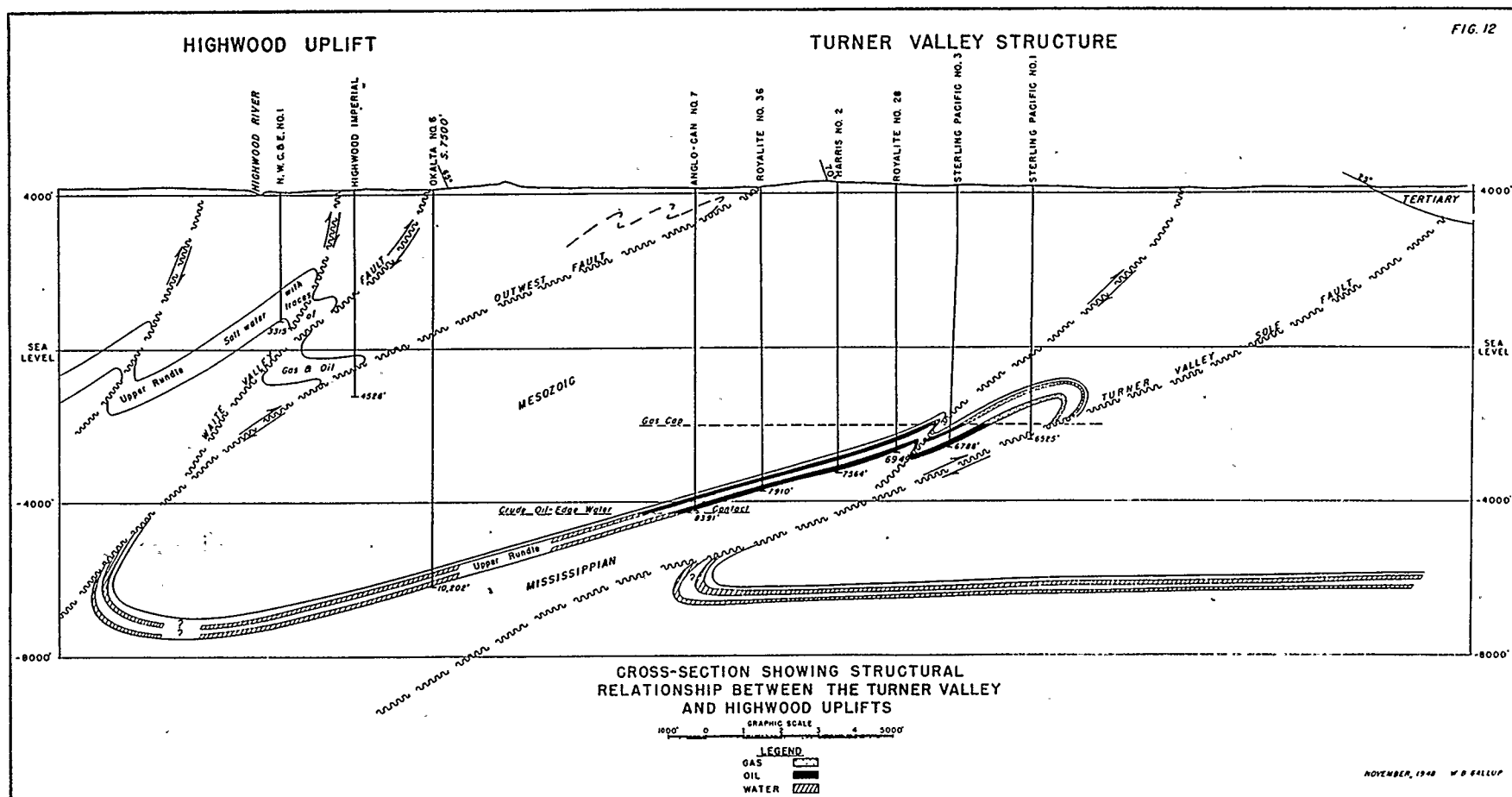
EXTERNAL FORCES AND DEMOGRAPHIC DEVELOPMENT

Numerous factors influence the development of natural resources. In the case of the Turner Valley, Alberta oilfield, many of these influences were external. As Canadian and international technology turned to a reliance on petroleum products, the first major Alberta oilfield became the focus of national and international interest. Capital for development came from England and the United States, two countries intent on controlling the international oil supply system. In Canada, various levels of government exerted their power to direct the development process. As a result of the conflicting interests of the various powers and the sporadic development of a largely unpredictable geological structure, the Turner Valley field boomed and burst several times as optimistic expansion alternated with disheartening failures. Eventually a pattern emerged as the oilfield and its people became pawns in a large, complex economic and political struggle.

A short discussion of the geological formation underlying the Turner Valley area is necessary to explain the subsequent development of this oilfield. Oil and gas reservoirs are thought to be formed in structures where organic material is trapped in a porous rock beneath a less porous or nearly impermeable material, which acts as an

inhibitor against migration from its original location. Structural changes which eventually trapped the hydrocarbons in this oilfield are presumed to date to the end of the Paleozoic era when gentle folds in the rock began. This was probably followed by more pronounced folding during the Jurassic era during which the oil and gas was in the early process of formation. Subsequent mountain-building activity created the limestone traps in Paleozoic rock which held the hydrocarbons until detected and exploited in the twentieth century. The simplified summary of the geology of Turner Valley should not suggest that this process was either simple or geologically common. In actual fact, the oilfield differs radically from the earliest developed sections in the centre of the field to the south and north ends. Illustration 1.1 shows a simplified cross-section of the oilfield with gas, oil and water indicated in the anticlinal formation. Illustration 1.2 further details the geological anomalies in the central area and shows some of the complexities of the fractured rock formations.¹

Illustration 1.1



Even to the eye of those not trained in geology, the above illustrations graphically depict the complexity of predicting the occurrence of any hydrocarbons. But the earliest developer in this oilfield, W.S. Herron, was not deterred by the incredible odds against finding petroleum and, based on observation of a gas seepage, eventually spudded in Calgary Petroleum Products No.1 well on January 1, 1913, on a site which lies within the boundaries of the remains of his first gas plant. An eventual discovery on May 14, 1914, of gas and naphtha in the Lower Cretaceous Blairmore formation rewarded his efforts and the well was eventually completed at the 3924 foot depth in 1916. As can be discerned from careful study of Illustration 1.1, this first well did not reach the major gas and oil bearing formation in the limestone which lay much deeper. Not until the middle 1920s was the Rundle limestone anticline punctured and the true wealth of the gas field revealed by Royalite No. 4 in 1924. Gas reserves in the field were estimated at 1,738 billion cubic feet and production from this reserve has continued since this first discovery.

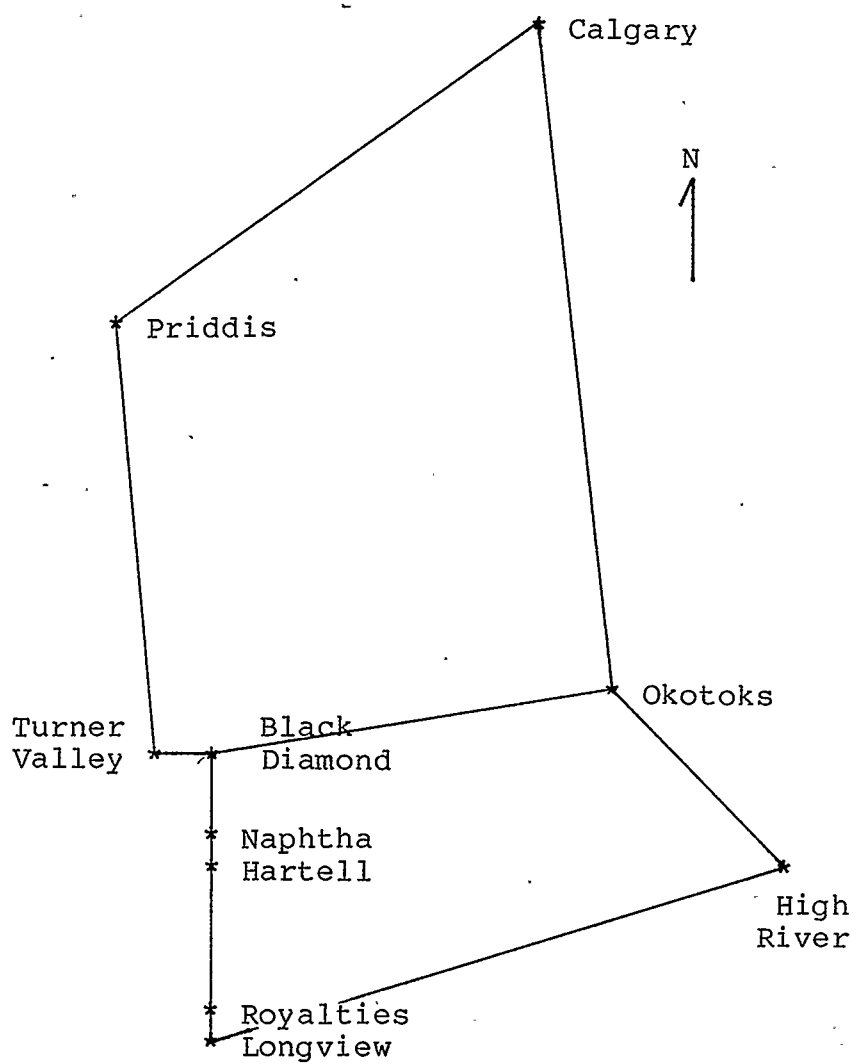
The next discovery, that of crude oil at a depth of 6828 feet by Turner Valley Royalties No. 1 in 1936, was forestalled by a number of factors. Although the field was eventually proven to be 22 miles long and 2.5 miles wide, the early wells stayed close to the original discovery. Tentative drilling with relatively limited cable-tool and first generation rotary drilling rigs did not allow the

testing of deeper levels. Once deeper tests were conducted they proved the lower formations below the gas cap in the central part of the oilfield to be silted or non-porous and consequently contained little or no additional gas or crude oil. As the drilling technology developed and the south end of the field was drilled, deeper test wells found commercial quantities of gas further south and west. A combination of better geological theory and modern technology eventually revealed the crude oil which made this oilfield Canada's largest producer through the wartime years until the discovery of a new geological formation at Leduc in 1947.

Numerous mysteries remain unsolved in the minds of geologists who spent the early parts of their careers in the Turner Valley oilfield. Among these are the fact that the porosity varies so much from one part of the oilfield to another and the puzzling phenomenon of gas which is extremely heavily laden with hydrogen sulphide in the north end of the field, while the same formation in the south end is almost "sweet" or free of sulphur. Nevertheless, the complex geology of the Turner Valley oilfield caused the area to be developed slowly as experience, theory and technology gradually changed the exploitation process. Although this unique oilfield has been studied for decades, no other similar fields have been discovered in the Alberta foothills. Therefore, the formation of this oilfield seems to have been largely determined by a complex of forces which were poorly understood at the time.²

Illustration 1.3

Map of oilfield showing settlements in relationship to Calgary, Priddis, Okotoks and High River.



I. EXTERNAL INFLUENCES

a. Economic forces

The history of oil and gas development in Canada reaches well back into the nineteenth century. Crude oil was produced in Ontario during 1857 from a well dug by hand.³ American oil companies gave the young Canadian companies fierce competition, and in 1880, the Imperial Oil Company was formed to provide a united national force against encroaching interests.⁴ However, competition from Canadian companies controlled by Standard Oil eventually forced the Imperial Oil Company to sell out to Standard in 1899.⁵ Thus the young Canadian companies which had attempted to keep the ever-expanding American oil powers at bay eventually became part of the burgeoning Standard Oil empire.

Although American affiliates controlled the Ontario oil industry before 1900, the Turner Valley field was not controlled by foreign interests until the 1920s. The first boom in the oilfield was caused by the discovery of oil-laden gas at the Calgary Petroleum Products No. 1 well on May 14, 1914. Evidently the rush for spoils in the first Turner Valley boom was financed locally, nationally and internationally. The Calgary newspapers reported hundreds of local investors sinking thousands of dollars into a few authentic companies and many more bogus operations. Men from Saskatoon organized an oil company to drill in the field that same year.⁶ An American oil expert, Mr. Von Dissen,

visited the oilfield in 1914 to investigate it for "a crowd of Vancouver moneyed men."⁷ Further afield, a British company with "unlimited backing" invested in Turner Valley.⁸ Mr. Cunningham Craig, "the prominent British geologist," spoke of the Turner Valley field in positive if somewhat conservative tones.⁹ American and British private investors cabled both their money and their requests for stocks.¹⁰

The boom in the Turner Valley field ended with the onset of the Great War, and by the end of the war both England and the United States recognized the importance of secure and reliable sources of petroleum. Since in any future war the countries which controlled the oil industry would be the power brokers, the major allied powers vigorously pursued sources of petroleum supply. As this struggle has been documented elsewhere,¹¹ it is sufficient to state here that both the United States and England sought control of the oil and gas in Turner Valley both during and after the war.

Regarding this contest for supremacy, the Calgary Herald in 1918 accurately foretold the increasingly powerful hold the Standard Oil Company was acquiring over the Canadian oil industry. After describing the monopolistic position of the American giant through its Canadian daughter, Imperial Oil, the editor wrote:

Primarily the oil fields of Canada belong to the people. They are part of the natural heritage of the nation and whatever happens to them it is the business of the government to see that two results ensue. The

people should be assured the use of the products of these fields at fair and reasonable prices. The country should be guaranteed such a revenue from the operators of the fields as will bear a fair relationship to the profits made from them...

If there has to be a monopoly of the oil business, as would seem to be the case from what has happened in the United States, why not a government monopoly rather than a private one? With the natural growth of Canada in years to come and the discovery of oil here in quantity, the story of the oil business of the Dominion would be much as it has been in the republic to the south - a making of untold millions. Is there any good reason why all this wealth should be handed over to private individuals? Is there any good reason why the government should not retain control over the refining end of the Canadian oil business and thus keep control of the producing fields?¹²

While this editorial suggested a combined role for the government and private investors in the oil industry, direct capital investment was not forthcoming from Ottawa.

Consequently, the investment necessary for further expansion in the field came from external private-sector investment.

In spite of wistful local editorials designed to prevent foreign domination of the Turner Valley oil industry, the oilfield was under American economic control by 1921. Although a London-based investor, W.H. Head of Barry, Head and Company, offered to buy out a Vancouver-based oil company with operations in Turner Valley in 1920,¹³ prospects for long-term financing from British backers failed to save the field from falling into the hands of Imperial Oil. American policy clearly claimed Canada as part of its global oil strategy. Therefore, even though the United States controlled seventy percent of world oil production in 1920, it still feared British companies would dominate future oil supplies. Britain controlled only five

percent of world oil production, but the following excerpt from United States Presidential candidate Warren G. Harding's speech in October, 1920, reveals the source of American concern:

We have seen Mesopotamia and Baku, Trinidad and Royal Dutch, the East Indies, Persia, Columbia and Mexico, all falling into the hands or under the influences of British oil interests. Our own engineers, operators and capitalists face the danger of being barred out of a chance for fair participation in future developments.¹⁴

The United States, already consuming more oil than it could produce, pursued similarly aggressive policies. The Canadian Annual Review for 1920 stated that: "the Standard Oil Company was doing its best in Roumania and in several South American countries and in Canada, through its Imperial Oil subsidiary concern, to meet this increased (and increasing) demand."¹⁵ Thus, both the United States and Great Britain intended to control petroleum supply and production in the "free" world.

Despite local companies' wishes for independence from international oil company control, a refinery fire at the locally-owned Calgary Petroleum Products plant in Turner Valley forced the only sizable independent oil venture in southern Alberta to sell out to the American-controlled Imperial Oil Company. In the months before the fire, federal conservation legislation threatened to close the plant because it was wasting gas.¹⁶ Furthermore, Imperial

Oil refused to accept gasoline unscrubbed of sulphur. In order to comply with federal legislation by adding capacity to the plant and appease the Imperial Oil Company by building a scrubber to clean the gasoline, CPP sought British financing in the summer of 1920.¹⁷ However, on Wednesday, October 20, 1920, a fire consumed an important building in the plant. Although newspaper accounts offer confused explanations for the blaze, the accident forced the CPP to sell out to Imperial Oil. In 1921, the new subsidiary was named Royalite.

In the years to follow Imperial Oil's subsidiaries in the Turner Valley oilfield acquired numerous independent oil companies. Imperial's desire to control this oilfield was not only persistent but also inconsiderate of at least one significant group of Calgary investors. W.S. Herron, the founder of Imperial's first acquisition in this oilfield, remained bitter towards the multinational's policies a decade after the original takeover. He wrote:

Imperial have disregarded their minority shareholder's rights [Herron was one such shareholder] in Royalite Company to whom they have given a mere pittance...[and] for years would not issue a financial statement, but looked upon the property as being entirely their own although some hundreds of thousands of dollars had been expended on the development of them before the property passed into their hands without payment of a dollar to the former shareholders of Calgary Petroleum Products Limited. 18

Thus, whatever the tactics used to acquire this oilfield, the Turner Valley oilfield sat securely under American control less than one decade after the original boom.

Few reliable statistics exist regarding the early investment in the early Alberta oil and gas industry. However, for the year 1921 a report on the character and distribution of investment in Canadian oil and gas companies shows an interesting trend. Of foreign investment in the Alberta gas industry, only fifteen percent was owned by American nationals, thirty percent was owned by British residents and the remaining fifty-five percent by Canadians.¹⁹ In the petroleum sector, however, Americans owned forty-five percent of the industry, British residents owned none and the remainder was ostensibly in Canadian hands. Although this shows a startling acquisition of petroleum production by Americans, they likely directed an even greater portion of the Alberta oil industry than these ownership figures indicate through control of Canadian firms.²⁰

The next major boom in the Turner Valley field occurred in 1924 after Royalite No. 4 penetrated the previously unpunctured limestone geological formation and tapped an enormous pool of highly pressurized, oil-laden gas. Consequently, in 1924²¹ and again in 1927, large American firms invested money in the field.²² Although the local unemployed complained that Imperial was slowing down exploration and withholding employment to suit its private whims, the editor of the local newspaper wrote that Imperial "as a private company can please itself entirely as to the running of its own business."²³ And it did.

Although Imperial dominated the field other external financing also migrated to the field over the ensuing years. In 1929 the Financial Post of Toronto hailed Turner Valley as an "Important Asset."²⁴ That same year the oilfield was "Spread in British Papers."²⁵ In 1930, investors from Vancouver visited the field to investigate the prospect of building a pipeline from the valley to the west coast,²⁶ and a company with five million dollars in British capital received a federal oil charter which included the rights to 4,000,000 acres in oil leases, including thousands in Turner Valley.²⁷ Although investment sagged during the early 1930s, the next boom in 1936 once again attracted outside capital. Turner Valley Royalites No. 1 well discovered crude petroleum in the Turner Valley field late in 1936. Finally, in 1939, eastern businessmen who had long scoffed at the idea of oil in western Canada recognized Turner Valley as an important part of the war effort.²⁸ But Standard Oil of California, part of the forced separation of the Standard Oil monopoly, also invested one million dollars in Turner Valley in 1939 along with other American investors.²⁹

Although most capital came from the United States, loyal British citizens from Alberta frequently went to London in hopes of attracting investment from Great Britain. Perhaps the most intriguing British investment scheme appeared in 1939. The local Turner Valley newspaper questioned the Conservation Board assessment of fees on

drilling sites. The fees seem to have been assessed at a much higher rate than necessary to pay for the local operations of the Board. It was suggested that the extra money was being used to finance a trip to England to attract British investment for a pipeline from Turner Valley to the Great Lakes.³⁰ In fact, the Alberta oilmen's delegation was headed by N.E. Tanner, provincial Minister of Lands and Mines. As Alberta contained the only major Canadian oilfield, the British investors saw the pipeline as a good venture. Two London oilmen were promptly dispatched to New York, Calgary and Edmonton to ascertain the pipeline's viability.³¹ However, an American consulting engineer scoffed at the idea of a pipeline to the Lakehead and suggested retaining only the local market. An employee of Imperial Oil backed up this assessment and placed the delivery cost of Alberta oil to Sarnia at \$1.37 per barrel or thirty-two cents higher than the prevailing price for Illinois oil delivered to Sarnia.³² Weeks later a member of the original delegation to England countercharged that the project was indeed viable. British capital was still interested since the proposed thirty-five million dollar, 12-3/4 inch pipeline would deliver Turner Valley oil to Sarnia at a total cost of only fifty-six cents per barrel. Regardless of the charges and countercharges, the pipeline was not built then.³³ However, the Anglo-American struggle to control oil in the world and in Turner Valley raged on.

Finally, statistics on foreign investment in the Canadian petroleum industry provide a useful summary of the character of oil production and ownership. Although these statistics refer to Canada as a whole, for our purposes they indicate the ownership of investment in Turner Valley because in 1930 some ninety-two percent, and in 1945 about ninety-four percent, of all petroleum produced in Canada came from Alberta.³⁴ In 1930, American investment in the industry totalled some 147 million dollars compared with three million dollars from Great Britain. In 1945 the respective figures were 152 million and seven million dollars.³⁵ In 1938 Americans received dividend payments from the Canadian oil and gas industry totalling twenty-eight million dollars, compared with one million dollars received by British investors. These numbers accounted for twenty-one percent and four percent of dividend payments received from Canada by the United States and Great Britain. Therefore, foreign investment in Canadian oil and gas development was largely American with British investment lagging far behind. Although the statistical information is incomplete, the figures show strong American economic control over the industry with lucrative returns on their invested capital.³⁶

I. b. Institutional forces

Although the international and national financial community played an important role in Turner Valley resource

development, numerous government institutions were attracted or forced into helping develop the Turner Valley oilfield. Generally, the federal government policies predated provincial involvement, and local government followed both of these sectors as the area grew. And even though these jurisdictional responsibilities and demands overlapped chronologically, there was demonstrable interest from the larger federal sector to the local institutions.

The federal government found itself intimately involved in the oil and gas industry in western Canada. Ottawa acted as landlord for the crown lands and controlled mineral rights in the west until 1930. It also felt legal and ethical obligations to protect and conserve these resources. Even though the federal legislation was weak,³⁷ the American government reacted quickly to any Canadian laws which barred the expansion of American oil interests. Prompt retaliatory legislation forced the Canadian government to allow Americans into Canadian oilfields, and by 1921 the American-owned Imperial Oil Company virtually controlled the Turner Valley oilfield.³⁸ Historically, government-industry collaboration was common in Canada, notably in the generous land grants conceded to the Canadian Pacific Railway in the 1880s. These in fact influenced the Turner Valley field, as shown by David Breen who has documented the close and somewhat tenuous relationship between the CPR and the Imperial Oil Company.³⁹ Ottawa, in his view, was certainly not aware of the long-term

implications of its earlier land grants to the railways.

The federal government, however, actively pursued other policies which directly assisted the petroleum industry. As landlord and possible beneficiary in the mineral development process, Ottawa established the Geological Survey of Canada in 1842, formulated a generous Dominion Lands Policy, and eventually established a federal corporation during World War II to help oil companies develop Canadian oil and gas. Early GSC surveyors also roamed the country mapping the contours and analyzing surface geological formations.⁴⁰ Examples of their activities abound: R.G. McConnell first mentioned Turner Valley in 1884; Dr. D.B. Dowling provided further analysis of the area's potential in 1913;⁴¹ S.E. Slipper added further information in 1914;⁴² Dr. G.S. Hume also speculated about the subterranean formations after the revealing discoveries of 1924.⁴³ Consequently, geological information provided by the GSC helped considerably to develop oil and gas in Turner Valley.

Dominion lands policy was also generous. In 1898, an Order-in-Council opened up lands south of CPR territory, in present-day Alberta, to oil prospectors.⁴⁴ In 1901 the regulation broadened to include all crown lands. During 1910, expenditures incurred became deductible from rentals, and royalties were not to be considered due until 1930. Minimum annual expenditures were specified and the government could, in case of war, "expropriate for the navy

the entire output of petroleum from Dominion Lands."⁴⁵

Foreign investors could legally prospect for oil in Canada after 1920, but the American Standard Oil Company, both directly through its Canadian subsidiary Imperial Oil and indirectly through its close relationship with the CPR, commanded early control of oil and gas in Canada decades before the laws acknowledged foreign investment control.⁴⁶

Up to 1930, revenue accruing to the Dominion from land rentals to companies totalled \$5,922,615. An additional \$4,500,000 was not collected but allowed to stand as "excess credits" or write-offs. These monies were applied to further rentals on new lands.⁴⁷ As Chester Martin has observed, "In effect the Department was bonusing the prospecting for oil in the interests of the national policy, with little regard for revenues."⁴⁸ Canadian national policy generously encouraged exploration at considerable public expense.

Although Dominion lands policy was progressive, producers consistently balked at industry controls and pleaded for economic incentives and direct financial contributions by the federal government. After new regulations were passed in 1920, a Calgary oil and gas newspaper harshly criticized the government for not doing more to encourage natural resource development.⁴⁹ Producers generally regarded government involvement in regulating development as an intrusion. However, when producers needed an upgraded transportation system in 1939,

they unabashedly approached the federal government for funds. The Alberta Petroleum Producers' Association, for example, requested that the Turner Valley roads be classified as "mining roads." Under such a designation the construction and maintenance costs of oilfield roads would be shared equally between the province and the federal government.⁵⁰ Ottawa, however, refused to fund the oilfield roads, perhaps interpreting the situation as a self-made local problem.

A few years later, wartime demand for oil promoted government-industry collaboration. In 1943, Ottawa formed Wartime Oils Limited to lend money to Turner Valley companies at a three-percent interest rate. Principal and interest were only due if the well struck oil. Such favourable financing prompted twenty wells worth four million dollars to be drilled in the valley in 1943. Although Carl Nickle's Daily Oil Bulletin condemned this government subsidy as intervention, some companies used the opportunity to drill risk-free and thereby render their heavily-indebted operations profitable.⁵¹

Ottawa eventually transferred mineral rights and crown lands to Alberta in 1930. Alberta first sought these revenue-producing rights in 1924,⁵² but the protracted negotiations continued until actual transfer on October 1, 1930.⁵³ The federal government, in retrospect, clearly did not understand the long-term significance of surrendering mineral rights to Alberta. However, it retained

legal control over interprovincial and international transportation of oil and gas. Additionally, Ottawa was freed from the constant regulatory, conservation and legislative duties when Alberta assumed these tasks. The government of Canada, in surrendering control of Crown Lands and mineral rights to Alberta, apparently sought minimal responsibility and maximum control over the politically volatile but nationally important oil and gas field at Turner Valley.

Similarly, the province of Alberta also sought control and income from the natural resources in its boundaries. However, upon receipt of the crown lands and mineral rights, Alberta also acquired many unforeseen problems. Once the government was receiving income from the oilfield the local inhabitants lobbied for various services. First, the people demanded and received village status for the settlements of Black Diamond and Turner Valley. It also appears that the province should have been more careful because only two years after incorporation each village asked to be placed on the indigent list. This list made the villages essentially fiscal wards of the province. As a result, Alberta financed the bankrupt villages for the following decade. In addition, the oilfield residents demanded roads, health-care services, schools, law enforcement, banks and a telephone system, each of which will be covered in a later chapter. But given the boom and bust nature of the oilfield, the provincial government was constantly straining to provide adequate

social services for the fluctuating needs of the community.

The responsibility of the Alberta government also included some legal and ethical obligations to the larger public, particularly to investors, and in the general area of resource conservation. Although editorials in local and regional newspapers warned the investing public and resident oil and gas experts greeted the 1914 oil discovery with cautious optimism, frantic investors bought shares in over five hundred companies.⁵⁴ Many of these companies owned no land and only intended to milk the crazed public of its money. The Calgary Stock Exchange, established October 25, 1913,⁵⁵ could not control the unscrupulous companies at the time. Finally the Great War punctured the bubble of optimism caused by the 1914 discovery and only a dozen companies survived. Alberta's Seventh Royal Commission was established under Judge Arthur A. Carpenter on July 15, 1915 to investigate the 1914 stock exchange problems. Judge W.A.D. Lees took over from Judge Carpenter and on November 8, 1916, as a result of this investigation Mr. G.E. Buck of the Black Diamond Company was convicted of "...publishing false statements." Buck was sentenced to four years in jail for his offence.⁵⁶ He certainly was not the only guilty party, but the government clearly attempted to control corruption by prosecuting exemplary cases.⁵⁷ Although the prosecution gave some force to the letter of the law, little had changed in the general appreciation of the spirit of the law.

Similarly, oil and gas conservation measures were neither understood nor appreciated. In the production process wet gas from the wells passed through condensing tanks, thereby losing most liquids in the process. The liquids were shipped to customers and the remaining useless gas was flared. Royalite's Calgary gas monopoly further aggravated the problem. With no market for their gas, the independent producers flared gas as quickly as possible. The more gas they flared, the more marketable liquid the independent operators produced. Shut out of the Calgary gas market by Royalite's monopolistic agreement with the Canadian Western Natural Gas, Light, Heat and Power Company, Limited, their only income could be derived from the sale of liquid products. Thus the independent producers were forced by the local market conditions to squander gas in order to survive. One estimate suggests that one-third to one-half of the total recoverable gas in the field was wastefully flared from 1924 to 1930.⁵⁸

Oilfield operators in the United States knew the importance of conservation by this time. However, American drillers and companies involved in the Turner Valley oilfield were no more concerned with conservation than their less experienced Canadian counterparts. The Annual Report of the Department of Lands and Mines for 1933 condemned the American contractors for their careless waste of gas.⁵⁹ In the face of this unregulated development, the Alberta government attempted to legislate order into the chaotic

exploitation process. Prior to 1930, federal attempts to control the oilfield consisted of minimal observation and suggestions.⁶⁰

After Alberta gained control over natural resources in 1930, provincial legislation including the Oil and Gas Wells Act of 1931 and the Oil and Gas Conservation Act of 1932 was passed in order to control waste.⁶¹ Spooner Oils Limited challenged the Acts in court and on June 20, 1932 the Supreme Court of Alberta upheld the right of the province to enact conservation legislation.⁶² Spooner appealed to the higher court and on October 3, 1933 the Supreme Court of Canada ruled the legislation to be "ultra vires" or outside the jurisdiction of the province.⁶³ Next, the government attempted to acquire a voluntary conservation agreement from the oilfield operators. The conflicting producers understandably refused to comply.⁶⁴ Finally, in 1938, W.F. Knode was appointed as chairman of the newly established Turner Valley Conservation Board. An American with considerable experience taming the East Texas oilfield, Knode suggested a conservation scheme. Prorationing, a system where each company produced a specific percentage of maximum production, was legislated by the Board.⁶⁵

Since Royalite's monopoly on gas sales to Calgary customers deprived the remaining producers of a legal outlet for deliquified gas, the independent producers saw the conservation legislation as patently unfair. However, Imperial Oil Company's reaction was even more belligerent.

Royalite's corporate parent agreed to the conservation legislation on the condition that the Alberta government pay it \$500,000 a year to abide by the law.⁶⁶ The prorationing system was designed to be economically self-sustaining and prolong the life of the field. Nevertheless, the oil companies refused to obey either the letter or the spirit of the conservation legislation.

Besides enacting ineffective legislation to control the oilfield, the provincial government also commissioned Mr. Justice A.A. McGillivray to investigate the marketing and distribution of oil and gas in the Turner Valley field. The report, submitted in 1941, found the field to be controlled by "a competitive capitalistic system."⁶⁷ McGillivray supported the ten to twelve percent profit margin enjoyed by Royalite in the field during the Depression years when hundreds of men in the field were looking for work.⁶⁸ The report so pleased the parent company that Imperial Oil published it to enhance the reputation of the oil industry.⁶⁹

In retrospect, it is clear that the government of Alberta attempted to control the waste of gas in the Turner Valley field. Ignorance of the true composition of the oil and gas pool and desire to produce a quick profit combined to limit the ultimate recovery of petroleum products from the field. Commissions appointed by the government sought the best advice and geological knowledge available, but the expert opinions proved limited. The government's attempts

to legislate order into an often chaotic development process met with limited success. When legislation was enacted, it was deemed unfair by the independents or outrightly violated by the multinational giant. The consistent powerlessness of the provincial politicians was thus occasionally masked by a commission which lauded the status quo.

At the district level, the municipal government attempted to service a variety of needs. Duties at the turn of the century included etching out primitive paths for roads and building bridges over creeks and rivers. Later, road grading and weed inspection and suppression provided local constituents with basic services.⁷⁰ A short history of the municipality includes this wistful comment: "Those councillors of 1905 might well look with a skeptical eye on our hurry, our rushing, and our demands for increased services and the resulting increased taxation. They might well wonder what they started."⁷¹

And finally, at the local level, town and village governments were formed to meet the demands of the boom towns and the more permanent settlements alike. Although each settlement is described in more detail in chapter three, for the purposes of this discussion it is sufficient to state that like the elected officials at the national, provincial and municipal level, the local politicians attempted to meet the various demands for local services. Also like the other politicians, the local officials found their responsibilities highly unpredictable and frequently

passed blame for local problems on to other levels of government.

II. Demographic developments

Available demographic information for Turner Valley is highly variable. Census statistics for the area include the federal census, taken the first year of each decade, and the provincial census, dated the sixth year of the decade.

Illustration 1.4 is a map of the area indicating townships, settlements and roads. Although not in the area of study, Okotoks and High River are included here because they were the main contact points on the railway. These two towns also provided much social and economic support for the oilfield area. Illustration 1.5 shows population growth for each township on Illustration 1.4. The towns of Okotoks and High River and the villages of Black Diamond and Turner Valley also appear. Illustration 1.6 graphically illustrates population fluctuations in each township. Finally, Illustration 1.7 does the same for the towns and villages.

Illustration 1.4
Map of oilfield showing townships.

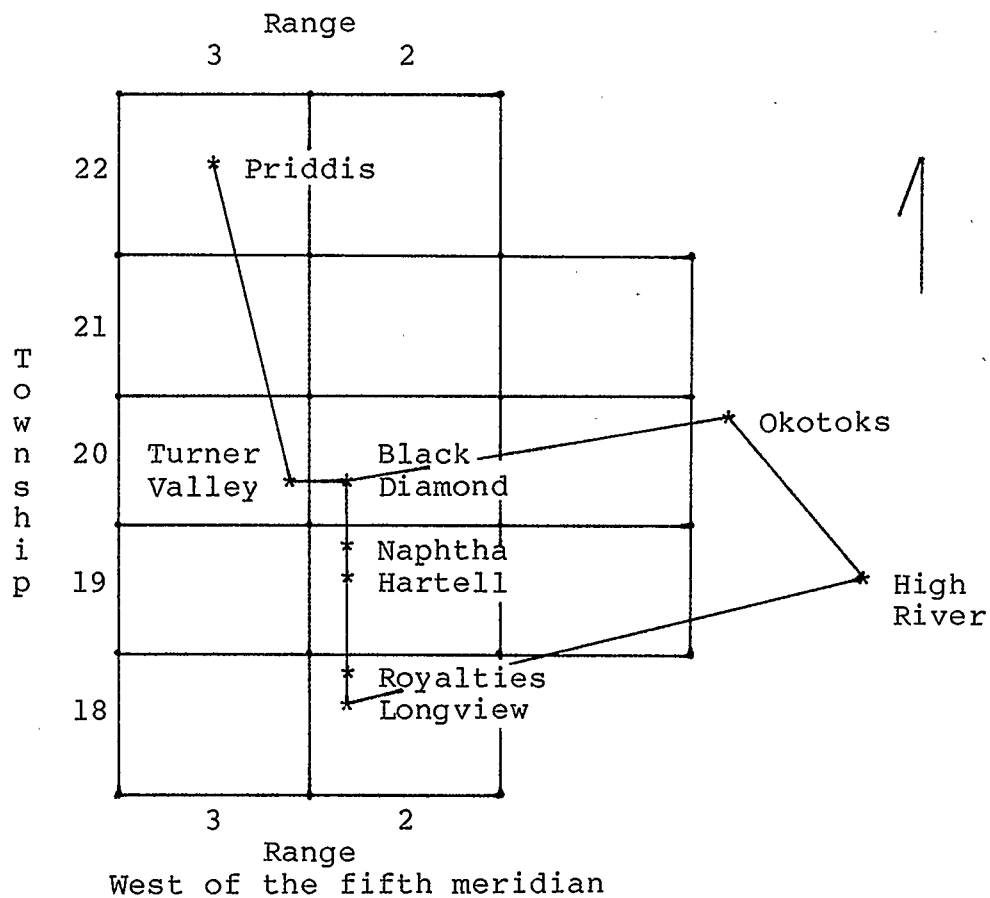
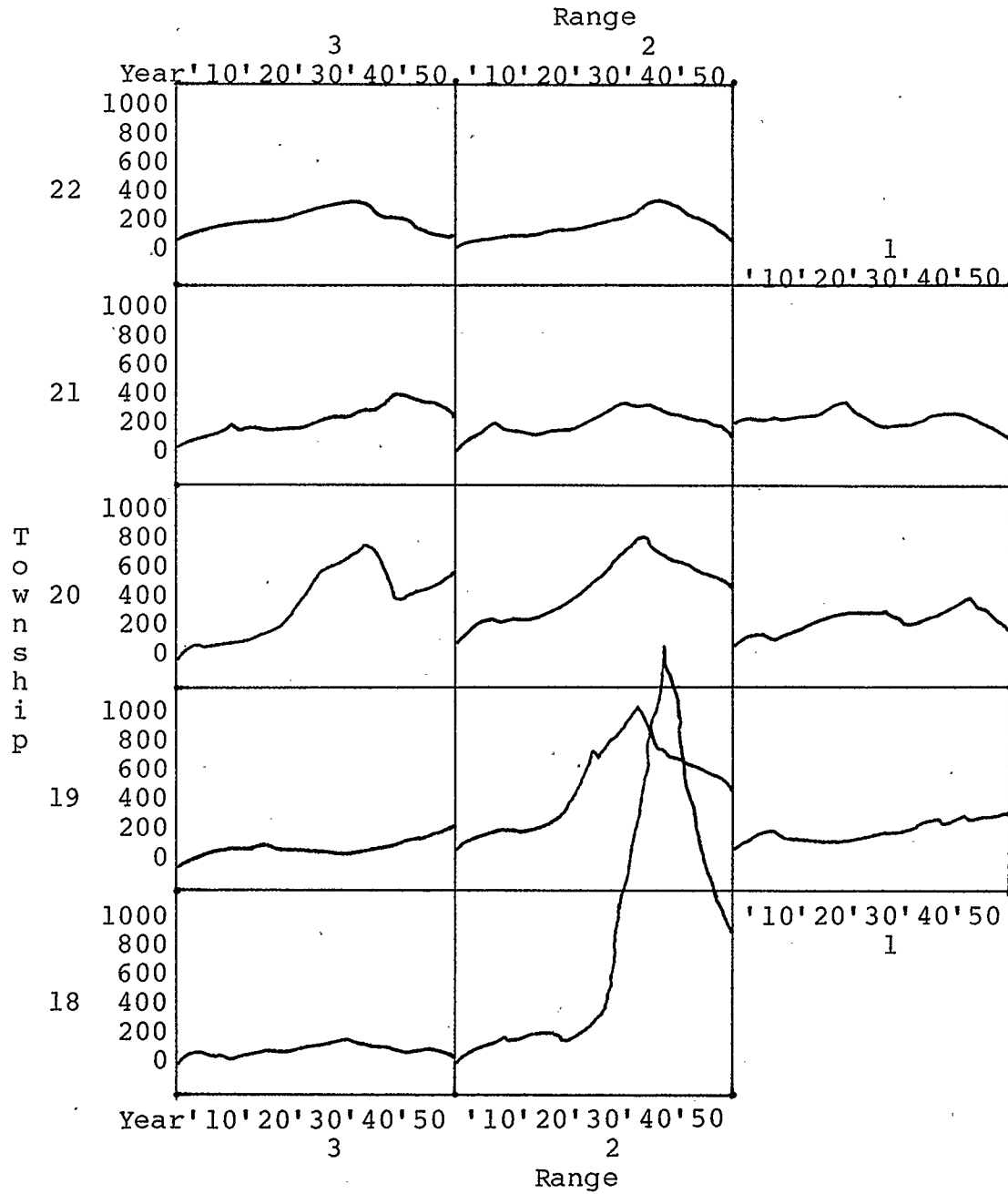


Illustration 1.5
Population according to Township and communities.

Year	1901	1906	1911	1916	1921	1926	1931	1936	1941	1945	1951
LSD*											
22-3	101	114	127	116	126	121	136	198	250	238	250
22-2	101	140	145	183	217	237	254	265	278	293	231
21-3	76	75	97	120	85	115	160	164	248	288	250
21-2	86	67	84	119	111	141	151	221	209	163	146
21-1	156	228	244	275	298	267	219	281	257	257	232
20-3	32	57	99	147	161	269	552	593	698	327	533
20-2	29	109	120	96	97	321	521	471	682	654	529
20-1	99	192	170	156	185	204	213	210	196	222	210
19-3	14	23	58	80	46	64	71	71	90	96	171
19-2	24	96	81	117	94	146	641	579	845	647	443
19-1	36	160	135	133	148	162	172	171	175	168	186
18-3	12	47	27	37	29	33	20	20	35	29	36
18-2	6	90	75	127	91	89	136	440	2151	1234	804
Black Diamond							683	657	890	1380	1154
High River			1182		1198	1377	1459	1359	1430	1674	1888
Okotoks	245		516		448	579	760	571	591	694	767
Turner Valley							656	475	676	1157	719

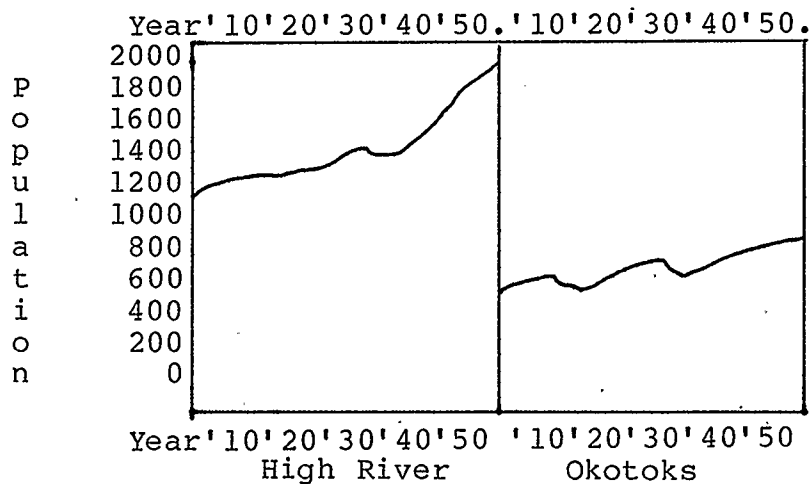
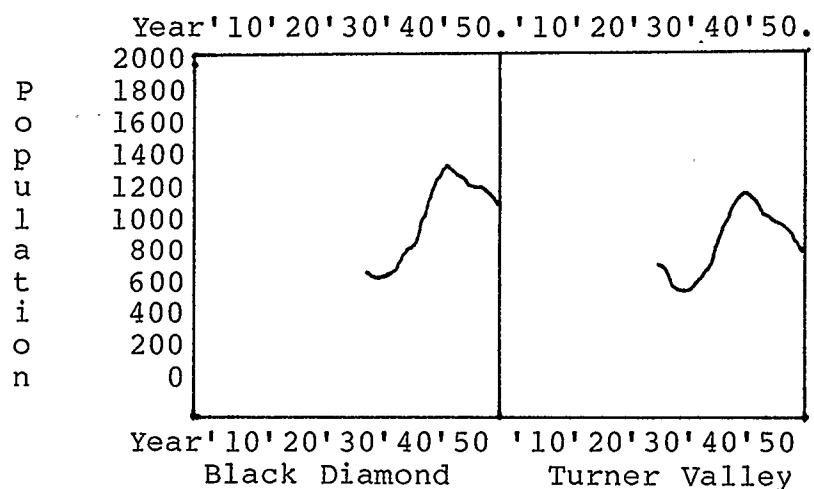
* Legal subdivisions west of the fifth meridian.
All statistics taken from the federal and provincial census.

Illustration 1.6
Population growth for oilfield townships.



Ten year periods beginning 1900, 200 person counts.
All statistics from census of Canada.

Illustration 1.7
Population growth for oilfield area communities.



Ten year periods beginning 1900, 200 person counts.
All statistics from census of Canada.

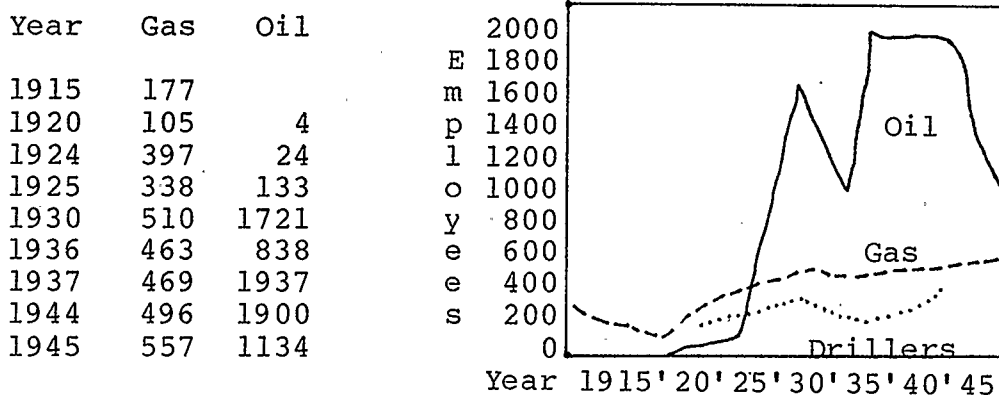
At first glance the population growth in the area may not seem exceptional. But many people moved into Alberta in the early part of the twentieth century, and closer scrutiny indicates a dramatic influx of immigrants into the valley in the 1930s. This was not the average pattern for the province or for western Canada in the Depression. The actual cause of this boom was the major oil and gas development in the field from the mid-1930s through the mid-1940s. This spurt of growth in the south end of the field nearly spelled the end of the villages of Black Diamond and Turner Valley. Many inhabitants from both communities moved to the south end of the field. Turner Valley, in the centre of the valley, only stayed alive because the Royalite plant, located beside the village, offered continuous employment. Black Diamond, however, was not created by the oil and gas industry as was Turner Valley, for it was an early trading centre for the area. Both villages show up on the census at the same time because they were incorporated circa 1930. After a brief experiment with local government, both villages filed for bankruptcy in 1931. The provincial government subsequently managed the villages through the Municipal Affairs Department until the 1940s. In retrospect, although their formation was premature, the villages subsequently had continuous statistics appear for them beginning with the 1930 census.

Although the census also contains information on the age, schooling, first or mother tongue, and religious

adherence of the people it records, for the purpose of this study this information is almost useless. These important statistics are only broken down to the level of census divisions. The division that includes the oilfield area also includes towns almost as far east as Brooks, south nearly as far as Lethbridge and west to Banff. Since this census division covers an area about ten times the size of this study it is, therefore, not very useful in attempting to ascertain the true composition of the oilfield population. Additionally, the census tract was changed at least once during the period in question, making any utilization of the census division records more complex.

Additional occupational statistics add some meat to the demographic profiles of each township and community. Although the following statistics on numbers of drillers, gas production and oil production personnel are incomplete, the information is illuminating. In 1921, 134 drillers were registered with the census: 1931: 288, 1936: 114, 1941: 407.⁷²

Illustration 1.8
Selected employees in the petroleum industry.

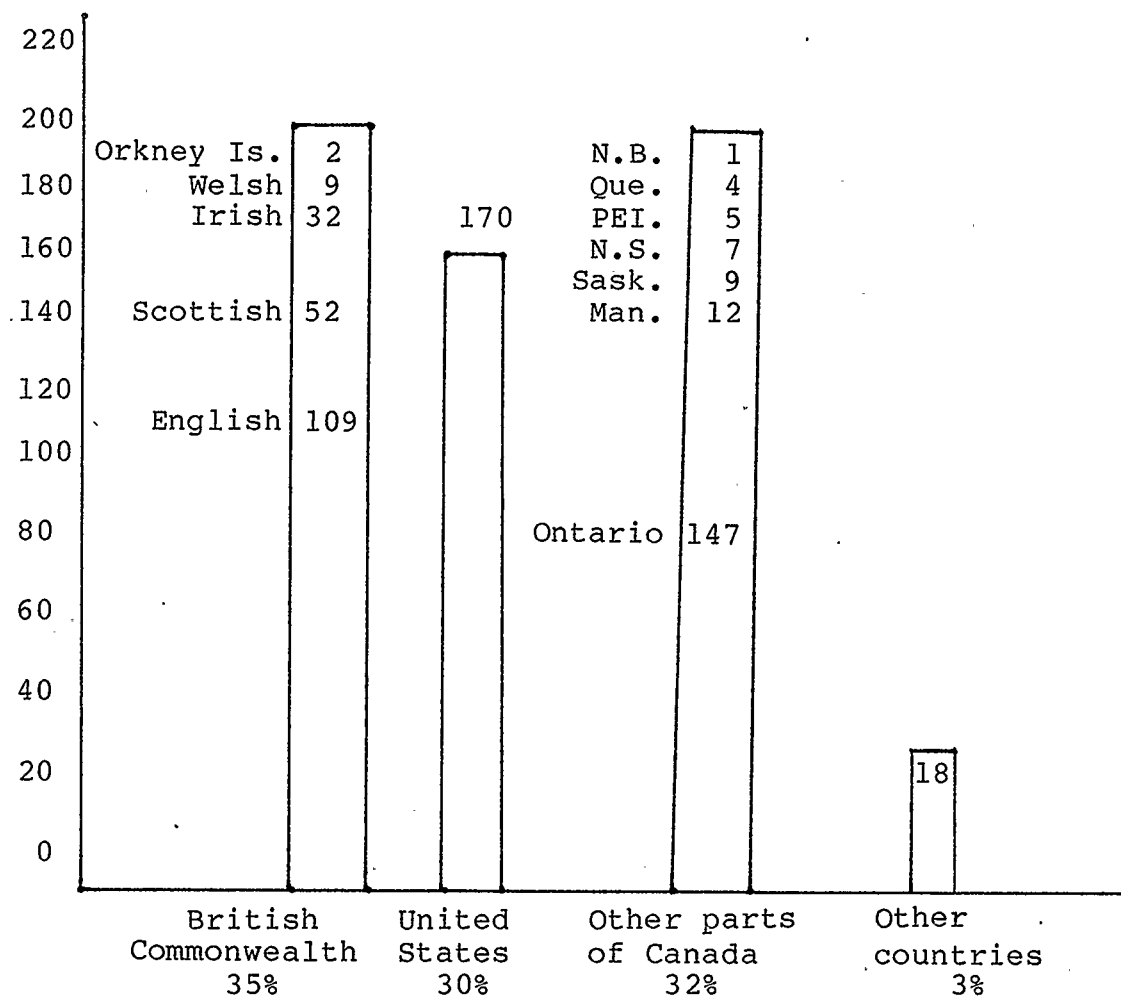


Compiled from Canada census statistics.

As depicted above, drillers and gas production employees experienced unemployment but personnel involved in oil production from 1925 to 1945 pursued very insecure occupations indeed.

Although the census information gives some specific information on the area, other records exist. Two local histories, one concentrating on the area around the villages of Black Diamond and Turner Valley and the other centered on the Longview area at the south end of the oilfield, were consulted for gross statistical information. When a reference was found in the text concerning the nationality of the family or the place from which they had moved to the oilfield, this information was recorded. Only every other family history includes this information and even then its nationality was sometimes obscured because the last place of residence often indicated little about the origins of the family. Even with these limitations the illustration which follows shows that immigrants came to this area from three general regions. Most numerous were the people who claimed the British Isles as their homeland; next, those who came to the oilfields from other parts of Canada, and finally, those claiming American ancestry made up almost a full one-third of the population.

Illustration 1.9
Origin of immigrants to Turner Valley.



Compiled from Tales and Trails and In the Light of the Flares.

Caution must be used with these statistics since they are unofficial. Nevertheless, the high proportion of Anglo-Celtic peoples indicated is not out of line with the predominantly British background of the settlers in southern Alberta. What is significant however is the high number of individuals claiming the United States as their last place of residence before arriving in the oilfields. As will be discussed in chapter two, the immigration of large numbers of American workers to this oilfield during the boom periods had a profound effect on the overall development of this area. Consequently, American influence on the oilfield was not only economic but social and cultural as well.

Conclusion

This review of the Turner Valley oilfield history further suggests a comparative resource-extractive setting. The exploitation of Canadian natural resources has gone on for hundreds of years and in each case external consumers provided a market for the Canadian cod, timber, coal, wheat or petroleum.⁷³ Consequently, the foreign markets controlled the Canadian economy. Where the extraction process was simple or mainly labour intensive, the Canadian semi-skilled or unskilled workforce quickly adapted its skills to the task. If the workplace was simple and inexpensive, local initiative developed the necessary technology and procured the capital to extract the staple and transport it to markets. In many instances the resulting

resource community was a combination of local initiative and external control. These single-industry towns extracted a product for an international market and when demand evaporated the community either changed its economic base or disappeared.

Turner Valley development was distinct from these earlier resource communities. Before petroleum was discovered, during the production booms and after its production peaked, Turner Valley had been a ranching and farming community. In other parts of Canada, small-scale operations were developed by individuals who fished, trapped, mined and extracted timber from Canada's rich resource coffers. Turner Valley oilfield production was, by contrast, an expensive, capital-intensive, high-risk business. Even the early investors in the successful Calgary Petroleum Products company were recent immigrants to Alberta, bringing capital and expertise with them. As the investment patterns previously mentioned suggest, the Turner Valley operations attracted large external capital investment throughout the exploitation and production period.

The oilfield also attracted and sustained a large immigrant labour pool. Initially, Americans were contracted to drill wells in the absence of trained Canadian drillers. American labour continued to flow into the valley as successive resource booms attracted American capital and contractors. Although Canadians later learned the skills

which the Americans brought with them, the immigration of American work crews continued unabated. Expensive equipment operated by skilled tradesmen also demanded a level of technology not indigenous to Canada. Rigs, motors, pipe, compressors, tools and other specialized machinery was imported from the United States. Although local welders performed nearly miraculous feats when called upon to improvise tools for immediate use, the expertise needed to construct complicated refineries was also imported. Finally, even the conservation legislation to control waste was imported from the United States. At every level of development, the Turner Valley oilfield relied on external knowledge, experience, capital and labour.

The effects of this highly technical, expensive, pivotal industry on the Turner Valley farming and ranching community were profound indeed. Whereas other resource communities were built, controlled and eventually abandoned by a single major employer, this early Alberta oilfield was initiated in an established community which experienced a massive onslaught from external sources, altering both its economic base and profoundly changing its society and culture.

FOOTNOTES - CHAPTER ONE

¹ W.B. Gallup, "Geology of Turner Valley Oil and Gas Field, Alberta, Canada" Bulletin of the American Association of Petroleum Geologists 35 (April 1951). pp. 797-821.

² Also of value in understanding the geology of this oilfield were a variety of other articles in the journals of the various American and Canadian geological societies. The most useful information, however, was received from interviews with geologists, S.R.L. Harding on August 20, 1985, and W.D.C. MacKenzie on August 21, 1985. Their answers to the author's sometimes geologically naive questions were helpful and their interpretation of the history of the oilfield was thorough and illuminating.

³ George de Mille, Oil In Canada West - The Early Years (Calgary: George de Mille, 1969), p. 19.

⁴ Ibid., p. 145, and Robert Page, "The Early History of the Canadian Oil Industry, 1860-1900," Queen's Quarterly 91 (4) Winter, 1984, pp. 849 - 866.

⁵ Ibid., p. 146.

⁶ Calgary Daily Herald (Calgary, Alberta), June 12, 1914.

⁷ Ibid., June 2, 1914.

⁸ Ibid., May 4, 1914.

⁹ Ibid., May 7, 1914.

¹⁰ Ibid., May 21, 1914.

¹¹ For a fuller analysis of this issue see: D. H. Breén, "Anglo-American Rivalry and the Evolution of Canadian Petroleum Policy to 1930," CHR, LXII, No. 3 (1981).

¹² Herald, April 23, 1918.

¹³ Alberta Oil Review and Industrial Record (Calgary, Alberta), May, 1920.

¹⁴ The Canadian Annual Review of Public Affairs (Toronto: The Annual Review Publishing Company Ltd., 1916), p. 276.

- 15 Ibid., p. 275.
- 16 Alberta Oil Review, March 1920.
- 17 Ibid., May 1920.
- 18 D. H. Breen, "The CPR and Western Petroleum, 1904-24," in The CPR West: The Iron Road and the Making of a Nation, ed. H.A. Dempsey (Vancouver/Toronto: Douglas & McIntyre, 1984), p. 241, and William Stewart Herron: Father of the Petroleum Industry in Alberta, (Calgary: The Alberta Records Publishing Board, Historical Society of Alberta, 1984), pp. 285-6 and 354-5.
- 19 Census of Canada, 1921, CA1-BS26-D8, p. 200.
- 20 Ibid., 1922, p. 204.
- 21 Herald, October 24, 1924.
- 22 CAR, 1926-27, p. 462.
- 23 The Turner Valley Observer (Black Diamond, Alberta), August 21, 1931.
- 24 Herald, April 2, 1929.
- 25 Ibid., April 4, 1929.
- 26 Observer, May 30, 1930.
- 27 Ibid., September 17, 1930.
- 28 Herald, September 23, 1939 and September 25, 1939.
- 29 The Flare (Black Diamond, Alberta), October 30, 1939.
- 30 Ibid., July 21, 1939.
- 31 Herald, June 27, 1939.
- 32 Ibid., October 19 and 21, 1939.
- 33 Ibid., November 2, 1939. Imperial Oil eventually became involved in a pipeline to the Lakehead in 1949. However, oil from the reef structures at Leduc and Redwater

was necessary to justify the project and the pipeline was built through the prairie provinces and midwestern states to Sarnia, finally delivering its first barrel of crude to Sarnia in 1953. Eric J. Hanson, Dynamic Decade (Toronto: McClelland and Stewart Ltd., 1958), pp. 157-159.

³⁴ Census of Canada, CA1-BS26-D8, 1930, p. 2, 1945, p. 5.

³⁵ Census of Canada, CA1-BS67-202, 1969, p. 124.

³⁶ Ibid., pp. 180 & 182. For more information regarding see Douglas Cass, "Investment in the Alberta Petroleum Industry, 1912-1930" MA, University of Calgary, 1985.

³⁷ Government of Alberta, Annual Report of the Mineral Resources of Alberta (Edmonton, Alberta: J. W. Jeffrey, King's Printer, 1932), p. 25.

³⁸ See Breen, "Anglo American Policy..." for a detailed review of American, British and Canadian restrictive actions and counteractions.

³⁹ See Breen, "The CPR and Western Petroleum..."

⁴⁰ For an authoritative and exhaustive history of the Geological Survey of Canada see: Morris Zaslow, Reading the Rocks: The story of the Geological Survey of Canada, 1842-1972, (Toronto: Macmillan of Canada, 1975).

⁴¹ T.A. Link, "History of Geological Interpretation of the Turner Valley Structure and Alberta Foothills, Canada," in The Third Annual ASPG Field Conference and Symposium, (Calgary, Alberta: Alberta Society of Petroleum Geologists, 1953), p. 120.

⁴² Ibid., p. 121.

⁴³ Ibid., p. 124.

⁴⁴ Chester Martin, Dominion Lands Policy (Toronto: The Macmillan Company of Canada, Ltd., 1938), p. 456.

⁴⁵ Ibid., p. 457.

⁴⁶ Ibid., p. 460.

- 47 Ibid., p. 461.
- 48 Ibid., p. 459.
- 49 Alberta Oil Review, March, 1920.
- 50 The Flare, April 28, 1939.
- 51 Earle Gray, Wildcatters: The Story of Pacific Petroleum and Westcoast Transmission (Toronto: McClelland and Stewart, 1982), pp. 74-75, and Philip Smith, The Treasure-Seekers: The Men Who Built Home Oil, (Toronto: Macmillan of Canada, 1978), pp. 96-97, 100, 135.
- 52 CAR, 1924-25, p. 425.
- 53 Ibid., 1930-31, p. 276.
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- 56 CAR, 1916, p. 748.
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- 58 Wm. H. Wolf, "Development Department: Field Training School," Internal document of the Energy Resources Conservation Board, Calgary, May, 1968.
- 59 John Richards and Larry Pratt, Prairie Capitalism: Power and Influence in the New West (Toronto: Canada in Transition Series, McClelland and Stewart, 1979), p. 57.
- 60 CAR, 1932, p. 25.
- 61 de Mille, p. 134.
- 62 CAR, 1932, p. 286.
- 63 Ibid., 1933, p. 262.
- 64 Mineral Resources of Alberta, 1932, p. 33.
- 65 Floyd K. Beach, An Engineer Looks at the Law:

History of Land Regulations and Land grants in Western Canada. Reprint from Canadian Oil and Gas Industries Volume 7, 4 & 5 (May and June, 1954), p. 10.

66 Richards and Pratt, p. 57.

67 Honourable Mr. Justice A. A. McGillivray (Chairman) L. R. Lipsett, Esq., J. J. Frawley, Q. C. Commission Counsel, Alberta's Oil Industry: The Report of A Royal Commission appointed by the Government of Alberta under the Public Inquiries Act to inquire into matters connected with Petroleum and Petroleum Products (Calgary: Imperial Oil Limited, 1940), p. 240.

68 Ibid., p. 268.

69 Ibid., foreward, n.p.

70 Story of Rural Municipal Government in Alberta 1900 to 1969 (Edmonton, Alberta: Alberta Association of Municipal Districts and Counties, 1969), pp. 253-256.

71 Ibid., p. 256.

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CHAPTER TWO

INDUSTRY, TECHNOLOGY AND LABOUR, 1914-1940

The development of oil and gas from the Turner Valley oilfield relied heavily on a sophisticated system of oil and gas exploitation. Although a reliable transportation linkage was important, the oilfield was poorly served as a result of decisions made by governments and corporations. The technology used to develop this oilfield was also imported from areas distant from Turner Valley and as a result, important technological decisions frequently proved inadequate to the local situation. The refining and pipeline system, although in the later years partially controlled by local investors and companies, was largely dominated by a single subsidiary of a multinational corporation.

Labour conditions and hours of work, although of utmost importance to the oilfield workforce, were similarly controlled by government legislation which was heavily influenced by company management. Additionally, American oilfield workers regularly usurped employment from Canadian oilworkers long after qualified Canadians were available to fill the full range of oil and gas production positions. Fuelled by these unilateral company actions, the oilfield workers organized labour unions only to find their attempts thwarted by company unions or deteriorating economic conditions which created a large unemployed labour pool,

only too willing to work for less than the union wage in poor conditions. And finally, a review of accidents and safety shows that although the industry was inherently hazardous, the poor relationship between the government and the industry, which considered any government regulation concerning safety as an unfair intrusion into its affairs, further endangered the lives of the workmen in this oilfield. Therefore, as a direct result of numerous external forces, the working conditions in the Turner Valley oilfield were controlled by technological, economic and political forces far removed from and unresponsive to the workers they affected.

I. Transportation Systems

In spite of the importance of a good linkage to the larger economy, reliable transportation was never available to the oilfield. Throughout the entire development period from 1912 until well after World War II, articles in local newspapers criticized the condition of the oilfield roads. In 1914, oilmen complained about the deplorable conditions of the roads they were forced to negotiate between Turner Valley and Calgary.¹ Although some efforts were made over the years, the problem was still unresolved in 1947 when a local farmers' group lobbied the provincial government to help it establish a road improvement organization for the oilfield area.²

The oilfield roads were never intended for the heavy

traffic which they carried. Originally the farmers merely cut across land, taking the most direct route from one settlement to another. Later, the municipality took on the responsibility of constructing bridges and accepted minor grading and weed suppression duties.³ Farmers' taxes were the only source of revenue to support road work. As oilfield development subjected the roads to unexpectedly heavy use, they deteriorated and were eventually unfit for travel during any rainy periods or the annual spring breakup.⁴ During these times, the normally rutted and potholed roads became impassable quagmires.

Calls for upgraded roads did not go completely unanswered. The provincial government accepted limited responsibility for reliable transportation to the region. Indeed, as the accompanying chart shows, government expenditures on oilfield roads amounted to only about one-fortieth of the income generated from royalties, fees, rents and taxes on oil and gas lands. Although the United Farmers of Alberta government was understandably hesitant to expend capital on oilfield roads during deficit years, a recent thesis by Susan Kooyman states that by 1925 the provincial government was out of debt, and during 1929 it experienced a budgetary surplus of almost \$2 million on a total budget of \$15 million. It was not surprising then that the letters to the newspapers and articles in the local oil weekly constantly called on the government to accept more responsibility for better roads.⁵

Illustration 2.1

Chart indicating income and expenses as relating to the roads in the Turner Valley oilfield.

Year	INCOME		EXPENSES	
	Gasoline tax	Fees/Permits Royalties	Pet & Nat Gas TV Con Brd	Expended on TV oilfield roads
1926				21 253
1927				
1928				3 611
1929	1 306 627			3 293
1930	1 793 252			108 899
1931	1 931 603	771 221	224 197	44 220
1932	1 501 197	163 528	57 659	8 375
1933	1 517 094		48 000	6 950
1934				24 397
1935		165 641	865	9 490
1936	2 220 907	233 061	34 372	7 236
1937		456 612	30 900	8 657
1938		534 110	29 250	23 821
1939		766 903	15 771	29 022
1940		748 992	68 229 *	64 205
1941		641 809	15 200	12 958
1942		760 042	23 768	25 136
1943		843 445	32 628	26 719
1944		743 385	29 810	40 705
1945		1 267 982	33 841	30 902
1946		903 341		
	<u>10 270 680</u>	<u>9 000 072</u>	<u>644 490</u>	<u>478 596</u>

* Special expenses in 1940 included a total of \$43,114.46 expended on the McGillivray inquiry into the oil and gas industry. Of this amount \$3,576.84 was for wages and \$39,537.62 was for other expenses incurred by the inquiry.

Chart compiled from Alberta Treasury Department Public Accounts (CA2AL/TD/P71) and Alberta Department of Housing and Public Works (CA2AL/PW/A56Y) for the years cited.

Neither the district nor the province were, however, willing to accept total responsibility for the transportation to the oilfield. As previously mentioned, the federal government was also approached for matching grant contributions under the legislation which would have classified the oilfield roads as mining roads. But Ottawa rejected the request and suggested that both the oil and gas operators and producers in the field take care of their self-made problem.⁶

Sporadic local improvement projects contributed to the minor provincial road-maintenance projects. In 1917 a Good Roads Association was formed with oilman, A.W. Dingman, as president.⁷ A decade later, the Oil Operators' Association raised \$7,300 and local merchants added their contributions to upgrade the routes.⁸ Provincial government cooperation with the local groups only lasted a year and the roads soon showed signs of abuse.⁹ Two years later, residents of Turner Valley contributed \$1,245 to help improve the situation,¹⁰ but this and numerous other minor attempts to ameliorate a long-term problem proved insufficient.

In light of the significance of the oilfield, good all-weather roads would have been justified. Indeed, in an early thesis on Turner Valley, Daniel Istvanffy claims that the oilfield roads were among the best in the province. He goes on to mention that the Municipal District of Stocklands was the richest municipality in the province and that

attacks on government road policy were most vehement from the strong anti- Social Credit editor of the oilfield newspaper, the Flare. Istvanffy also maintains that the poor roads may have contributed to the attempt to recall the Premier in 1937.¹¹ But in spite of the various attempts to maintain them, oilfield roads were clearly unable to meet the heavy demands placed on them. Indeed, all levels of government as well as industry and private individuals would have benefitted from better transportation linkages between the oilfield and the greater Alberta economy.

Careful analysis of the situation also suggests that Turner Valley was geographically too close to Calgary to warrant the construction of better roads. The roads were marginal but passable much of the year and equipment could be transported to the oilfield regularly if not every day of the year. Farmers in the immediate oilfield area were understandably reluctant to bear higher taxes for roads which the oil companies demolished. Oil companies, although reaping profits from the field, were also unwilling to take responsibility for roads since, in their view, they surrendered various forms of compensation to the provincial government. The provincial government was similarly unwilling to upgrade roads which, with minor attention, were marginally passable much of the year. And finally, although the federal government was approached for aid, it was all too willing to allow the various interests in the Turner Valley region fight it out amongst themselves.

Theoretically, a more remote setting might have changed two important aspects of the transportation linkage with the outside world. First, a more remote oilfield might have made more explicit the demand for reliable transportation and secondly, it might have forced the producers to cooperate in the construction of a reliable two-way transportation linkage. One option for Turner Valley was a good road which could transport equipment and supplies to the valley and petroleum products back out to the markets. The export function a reliable road might have served became unnecessary when pipelines were built to carry oil and gas to Calgary. An isolated oilfield would have made the one-way nature of a pipeline impractical since machinery and supplies would still have needed a reliable system of conveyance to the growing resource area. Therefore, as a direct result of its proximity to Calgary, the Turner Valley oilfield managed to survive throughout the development period with a marginal road and a pipeline transportation system.

The only viable alternative to the poor roads and one-way pipelines was a railroad. At least five different rail projects were proposed which would have passed through the oilfield.¹² Patrick Burns supported one early and potentially viable project and called it "The Calgary and Southern Railway." Incorporated in 1918 with extensions granted every few years thereafter for decades, the Burns line was primarily intended to serve his coal mine west of

Turner Valley.¹³ Demand for coal from the Burns mine was eclipsed by Calgary's transition from coal to natural gas as a fuel source. Natural gas was supplied by the Canadian Western Natural Gas Company which had a monopolistic agreement with the Imperial Oil's Royalite Oil Company in Turner Valley.

The railway scheme with strongest backing and chance for success was proposed in 1929. Officials of the Canadian Pacific Railway, which had considerable land and exploration interests in the valley, were described in a newspaper headline as "Keenly Interested in Oilfield Developments" and were reportedly "prepared for any eventuality according to Grant Hall, senior vice-president of the Canadian Pacific."¹⁴ A later editorial in the Calgary Herald assured readers that a spur line of the CPR through the foothills of southwestern Alberta would not only serve the oilfields, coal fields and farmers but it would also reduce the mileage between Calgary and the Crownest Pass.¹⁵ By September of that year, however, Edward Beatty, chairman and president of the CPR, downplayed the chances of a spur line running through the booming oilfield. He cautioned that "the piping of oil to a central point for treatment would make a railway unnecessary, as after the field [was] in the full process of exploitation, the tonnage of materials and supplies required at the scene of operations would be limited."¹⁶

Indeed, Beatty's analysis was correct. A railway was

only economically viable if it could generate two-way traffic for an extended period of time. The CPR's interest in the oilfield lay in making profits from its considerable land and mineral rights, not investing capital in a poor-risk railway spur line. Therefore, due to its proximity to Calgary, the only economically viable transportation linkage to the oilfield was the road and pipeline system which ultimately developed.

II. Technological Linkages

The demand for good roads and/or a railway was caused by the need to transport heavy machinery necessary to find, extract, refine and export, oil and gas. The increasing dependence of motive and traction power on natural gas and gasoline fuels foreshadowed the end of steam power as early as the 1920s. Although the complete transformation of railway locomotives to fuel oil and later diesel would take decades, the advent of the oil-electric locomotive in 1926 and the attention it attracted in the Western Oil Examiner boded well for the petroleum industry in Alberta.¹⁷ An increased demand for petroleum products would give the oilfield added markets, but only if more oil could be found and brought into production. In order to meet these new demands, Turner Valley was forced to seek highly specialized equipment and knowledgeable employees from across North America.

Almost all equipment used in the oilfield was imported

from the older, more established oilfield equipment manufacturers in the American northeast and south. One exception was the Riverside Iron Works company in Calgary which expanded its operation to service a broader range of oilfield needs in 1927.¹⁸ As a rule, American suppliers met most equipment needs. As early as 1914 the International Supply Co. Ltd. was suing Black Diamond Oil Fields Limited for failure to pay rent on equipment.¹⁹ By 1926, during the next exploration boom, Oil Well Supply Company of Pittsburgh opened a permanent branch office in Calgary.²⁰ Although a British machinery company expressed interest in a share of the oilfield market in 1929²¹, by the end of November of that year, customs receipts at Okotoks for machinery imported from the United States totaled \$616,629.62 for the period from 1927 to November 1929.²² By the middle of peak Turner Valley production during World War II, both Drilling Supplies and Lucey Export Corporation of New York were represented in the lucrative oilfield equipment business.²³

Duties on materials and supplies imported from American manufacturers proved onerous to the Alberta oil industry. A call for elimination of duties on all oilfield machinery in 1923 was greeted with an abolition of duties on all foreign-built equipment and supplies.²⁴ Although some Canadian machinery was available, most oilfield technology was imported from south of the border.

Drilling technology, although affected by some puzzling

new geological anomalies in the Turner Valley field, was largely imported from the United States. For example, the early Pennsylvania-manufactured steam-powered cable tool rigs used coal and wellhead gas to precipitate the discovery in 1914²⁵ and when the Calgary Petroleum Products' well proved the field's potential, eight rigs were immediately ordered from one California manufacturer for the newly formed drilling companies.²⁶ Cable-tool rigs, although gradually replaced by rotary and diamond bit rigs, continued operating in the Alberta oilfields until the late 1940s. The last open-hole cable-tool well was the Maxmont No.1 well of Lundbreck in southwestern Alberta. After many years of drilling, this deepest cable tool hole was abandoned and dry at the 9879 foot level.²⁷

The next type of rig was not the well-known rotary so common in later years, but the diamond rig. The first diamond rig in Canada was used by Union Pacific in 1914.²⁸ In 1930, after cable tool and conventional rotary rigs had both encountered extremely complex problems drilling into the slanted limestone formation which underlay the Turner Valley area, I.W.C. Solloway, a stock broker of some reputation, forecasted the resurgence of diamond drilling technology to conquer the stubborn Turner Valley drilling problems.²⁹

Rotary technology eventually took over the main share of drilling the Turner Valley field. In 1925, after the penetration of the limestone and the discovery of a new pool

of gas by Royalite No.4, Imperial Oil imported two rotary rigs for use in the new "wet" gas field. The 114-foot tall rigs covered three train cars and were valued at \$250,000. Unloaded at Okotoks, they were hauled to the valley to drill Royalite wells number 5 and 6.³⁰ Only days later, Vulcan Oils Ltd, received a rotary acclaimed as the "heaviest ever brought into Calgary" from Union Iron Works of Lola, Kansas.³¹ When the big rigs at Royalite 5 and 6 encountered problems in the unique Turner Valley formation, Paul Stock, a Wyoming contractor, was brought in to analyse the situation. He suggested the fast rotary rigs be used to drill to the limestone and the slower but more reliable cable tool units be used in the problematic limestone formations.³² Two years later in the Bulletin of the American Association of Petroleum Geologists a summary of Turner Valley drilling technology confirmed that this drilling combination was indeed the only reliable method of overcoming the severe technical difficulties posed by the Turner Valley oilfield.³³

In 1937, another American technological advance was imported by Maynard J. Davies of Davies Petroleum Co. Ltd. Davies, his chief drilling superintendent, Harry Morgan and L. McLean of International Drilling Supplies, chartered an airplane and flew to Wichita, Kansas to inspect natural-gas-driven rigs which were "widely used in United States fields."³⁴ Finally, in 1939 the first diesel driven rigs were imported by Ralph Will of Drilling

Contractors for use in the Turner Valley oilfield.³⁵

Drilling proved expensive for Imperial Oil figures in 1938 revealed that the average cost of drilling in the Turner Valley field was \$212,000 per well, or almost three times the American average.³⁶ Although part of this extra cost was due to the problems encountered in the complex Turner Valley formation, other factors contributed to the expense. First, equipment and supplies were imported from great distances, thereby raising transportation costs. Although qualified men were available locally, many workers were imported from the United States. Finally, when problems necessitating special operations or control of wells arose, the experts considered were once again Americans imported at a substantial cost.

Enhanced recovery operations included the explosion of 150 quarts of nitro-glycerine by A.J. Bankson of the Wyoming Torpedo Company of Basin, Wyoming in 1916. Both the expert and the explosives were imported from the United States.³⁷ When the Royalite No.4 well blew wild in 1924, American wild-well experts were imported to contain the blaze. After weeks of uncontrolled flaring and unsuccessful attempts to extinguish the inferno, two Oklahoma experts snuffed out the flame with steam, diverted the gas flow and capped the well.³⁸ Additional American technological advances such as perforation and acidization were also implemented, beginning in the late 1930s, to increase oilwell production.³⁹ The famous Turner Valley Royalties No.1 well

which produced oil at the rate of 500 barrels per day on the southwest flank of the oilfield was acidized and boosted to 2400 barrels per day.⁴⁰

In time, Albertans learned all aspects of the drilling process and government programs were established to provide sound training. In 1929 the provincial director for technical education, Dr. W.G. Carpenter, established a technical training program for oilfield workers which included instruction in welding, steam engineering, mathematics and general engineering.⁴¹ Although technology and expertise were eventually mastered by Turner Valley's local populace, nearly all the equipment, expertise and knowledge which was used to develop the oilfield was imported, some from other parts of the Canada, but most from the United States.

III. REFINING AND PIPELINES

Once drilling was met with success, industrial systems were needed for refining and distributing the products. To this end, a system of plants and pipelines was built to complete the link with the consumer. The first major pipeline in Alberta was not linked to Turner Valley, but its history became intimately related to Turner Valley gas production. In 1912, a 170-mile long, 16-inch line was built to carry gas from the Bow Island field in southeastern Alberta to Calgary and other communities. By the 1920s Calgary developed a dependence on an ever-increasing supply

of gas, and when the Bow Island field began to lose pressure and eventually fall short of Calgary's winter demand, another source had to be found.

The first refining efforts in western Canada began after the 1914 discovery of gas in the Calgary Petroleum Products No.1 well when the company distilled naphtha from the wet gas by means of a crude separator. Next it added a compressor, the first used in Canada, and an absorption plant. The absorption plant was not only the first one used in Canada, but also, according to a recently published history of natural gas processing in Canada, one of the first in the world.⁴² All of this advanced technology was in place by the end of 1914 and controlled by the Calgary owned CPP company.

By 1920, CPP had invested over \$50,000 in its absorption plant at Turner Valley.⁴³ However, the young, independent company faced severe economic problems and was forced to seek financing in England. An unfortunate fire in the fall of 1920 spelled the end of this constantly unstable company and it was forced to sell out to Imperial Oil. Royalite, as Imperial named the new company, was incorporated on January 18, 1921.⁴⁴ Imperial Oil owned 80% of the \$1,000,000 in stock and Dingman, Herron and two other men received the remainder, but no cash, as payment for the old company.⁴⁵ In 1921, Royalite built a new absorption plant⁴⁶ and a compressor station was added.⁴⁷ Finally, in December of that year a six-inch pipeline was built

connecting the gas plant at Turner Valley with the Canadian Western Natural Gas Company pipeline from Bow Island to Calgary.⁴⁸

Technological innovation over the following years was largely the result of Imperial Oil's activities. It began construction of a refinery in Calgary in 1922,⁴⁹ and in 1923 the capacity of the compressor station in Turner Valley was doubled.⁵⁰ In 1925 a Seaboard Scrubbing Plant was built to remove hydrogen sulphide from the sour gas found in Royalite No.4.⁵¹ Whereas oil from the valley was trucked to the Calgary refinery in five big tank trucks,⁵² in 1925 the unreliable roads were bypassed by a four-inch oil pipeline from the valley to the new refinery in Calgary.⁵³ In that same year another ten-inch gas pipeline was built to Calgary, providing increased capacity for the ever growing demands of the city. Finally, in this busy year, another used absorption plant was imported from C.F. Brown and Company of Alhambra, California.⁵⁴ In 1926 Royalite acquired 51% ownership of the Dalhousie Oil Company Ltd. in the first of at least twenty-six purchases of Turner Valley companies.⁵⁵ By this year, many companies were forced to sell their naphtha to Royalite as there was no other refining and pipeline facility available to the Turner Valley independents.⁵⁶

In February, 1927, Imperial arbitrarily cut the price it paid independent producers for naphtha.⁵⁷ In response, a Western Oil Examiner editorial called for competition in

the refinery trade to combat the high-handed way Imperial had treated the smaller companies.⁵⁸ Consequently, in August, 1929 a new refinery was opened in Calgary under the name of Regal Oil and Refining Co. Ltd. which served the needs of the local small oil companies.⁵⁹ With Eric Harvie as president, the Alberta Pipe Line Company was at the same time incorporated to build a four-inch line from Turner Valley to the new Regal refinery in Calgary. Royalite's complete control of pipeline capacity was thereby finally broken.⁶⁰

Although some competition was provided by such independents in the gasoline processing area, Royalite's monopoly on the distribution of gas to Calgary through the Canadian Western Natural Gas Company remained unchallenged for many years. In 1928 another gas pipeline was built from Turner Valley to the city. The new fourteen-inch line cost \$300,000 and boosted the Gas company capacity from 48,000,000 to 75,000,000 cubic feet per day.⁶¹ The following year Regal Refinery built a four-inch oil pipeline from Turner Valley to Calgary. Its owner, Frank P. Brook of Detroit, thus offered another small alternative in the oil refining sector.⁶²

During 1930, ostensibly as a conservation measure but also as an attractive generator of income, Royalite responded by pumping surplus scrubbed gas down the pipeline to the Bow Island field. Although gas demand was high in the winter, during the summer much gas was wasted. Storing it

in the Bow Island reservoir both gave a secure source of extra gas for the winter months and added income both to the Gas company and to Royalite.⁶³

Next, when an explosion at the Royalite plant in January, 1932 shut down the gas scrubbing facility, Calgarians became acutely aware of their vulnerability to a single source of gas supply. For seven critical hours the city dwellers received unscrubbed gas into their houses and experienced first-hand the smell of hydrogen-sulphide gas so familiar to oilfield residents.⁶⁴ The next Royalite effort to extract income from the waste gas came about in 1933 when it built a large new absorption plant to strip off all possible liquids from the wet gas which had been routinely flared. The new plant was designed and constructed by "Charlie" Ward of Oklahoma.⁶⁵

During 1934 Imperial once again made an arbitrary cut in the price it paid to naphtha producers⁶⁶ and the Oil and Gas Shareholders Association investigated the unilateral action and its consequent negative effects on its members.⁶⁷ Later that year, Gas and Oil Products imported a used absorption plant and set it up at the Mercury camp in the south end of the oilfield. The California built equipment was the first competition for the Royalite-dominated field but its daily capacity of 80,000 cubic feet was little more than token competition.⁶⁸

Royalite reacted to the rapid development in the south end of the valley in 1935 by building an absorption plant

with machinery taken from the Turner Valley plant. Ten used absorbers gave the new plant a capacity of 60,000 cubic feet per day. The main plant received four "new large high pressure absorbers of Canadian manufacture."⁶⁹ Then in 1936, the British American company bought a used absorption plant in Coutts, Montana and moved it to the south end of the field near Longview. The \$400,000 plant provided another alternative to the Royalite monopoly on gas and oil refining in the oilfield.⁷⁰

No new pipelines were built during the first half of the 1930s. Only with the discovery of oil on the southwest flank of the field was there enough increased oil production to warrant more lines. In 1937 Royalite purchased the four-inch oil pipeline previously built by Alberta Pipeline Company. Royalite also built its own four-inch line and in the fall began construction of a new six-inch oil pipeline to Calgary. By the spring of 1938 Royalite's combined pipeline capacity reached a maximum of 24,000 barrels per day. Pipeline charges to producers dropped from \$.30 in 1930 to \$.15 per barrel in 1937.⁷¹

Then, as a result of calls for an investigation by independent producers, a royal commission was established by the Alberta government on October 12, 1938, thereby creating the next major change to Turner Valley pipeline policy. Three board members were "requested to give consideration to taking over the wholesale and retail distribution of petroleum products" in Alberta and/or make "a thorough

inquiry into the spread between the field price of crude oil and the wholesale and retail prices...with a view to bringing about a reduction in the consumer price." The commission's findings were released April 17, 1940.⁷² An edited version of the findings of this inquiry reviewed exploration, production, transportation, refining, marketing, taxation and conservation as they related to the Turner Valley oilfield.

During the inquiry it became evident that Royalite and Imperial were so closely interwoven and vertically integrated that it was impossible to attempt to set realistic prices, based on actual costs incurred in the production, refining and distribution of the products. Partially in response to the call by independents for an alternative to the monopolistic pipeline system,⁷³ the inquiry recommended the establishment of the Valley Pipe Line Company Limited as a public utility, wholly owned by Royalite. The board of public utility commissioners set the pipeline rate at \$.095 per barrel as compared with Royalite's own \$.15 rate.⁷⁴ Although a public utility to carry oilfield products to Calgary had been suggested as early as 1925, the transportation of petroleum liquids was controlled by a vertically-integrated organization until World War II.⁷⁵

Although the inquiry effectively established the pipeline as a public utility in 1939, Turner Valley residents experienced some negative effects as a result of

the inquiry. For years the local residents merely tapped into the nearest gas pipeline and paid a flat fee for their heating and cooking fuel. Although the gas was sour, they managed to live with the odors and danger of explosion. But in 1939, the chairman of the board, G.M. Blackstock, K.C. insisted that all oilfield residents now switch to the safer scrubbed gas. As Royalite was the only supplier of clean gas in the valley, charges of forming an unfair monopoly were levelled against the chairman, who replied: "The village is, therefore, faced with the problem of finding a safe gas and complying with the board's regulations or turning to some other type of fuel."⁷⁶ Since no other clean fuel was available, Royalite consequently commanded an effective monopoly on the local gas utility.

Therefore, Royalite's strong hold on the oilfield continued throughout the 1930s and until after the next war. In 1948 Imperial formally offered to purchase the company for \$17,040,316.25 but was rejected.⁷⁷ By the end of the 1940s Royalite was beginning to branch out from its original Turner Valley oilfield and in 1949 the company was sold to another major petroleum firm, British American.⁷⁸ For nearly thirty years Imperial Oil, though its subsidiary Royalite, controlled the major part of the refining and pipeline capacity of this oilfield. Whereas the Turner Valley area was a blank spot on Imperial Oil's company map in 1920, by the end of World War II it had been fully absorbed into the multinational's system for many years.

IV. LABOUR CONDITIONS

The oilfield workforce was also affected by many uncontrollable external forces. During the booms and busts which characterized the Turner Valley oilfield development process, employment was similarly unpredictable. When work was available it often constituted twelve-hour days for weeks on end without days off. Concurrently, many men were unemployed due to the long hours worked by their fellow employees or as a result of American workers filling both skilled and unskilled positions for which Canadian workers were available. In response to these unpredictable labour conditions, the oilfield workers lobbied governments for closer enforcement of the labour codes which controlled hours of labour. They also complained about the Americans who were taking jobs away from Canadians and formed labour associations and unions in order to better their living conditions.

Given the volatile nature of the development process, employment in the Turner Valley oilfield was unreliable even during the best times. Although the field was developed in three distinct time periods, the financing of oilfield development was responsible for the fluctuating booms and busts. Typically, drilling crews worked twelve-hour days, sometimes without days off, until the well was brought in, declared dry, or the financing ran out. Refinery employment was more stable but the hours were often just as long. In some cases men lived at the compressor stations and shifts

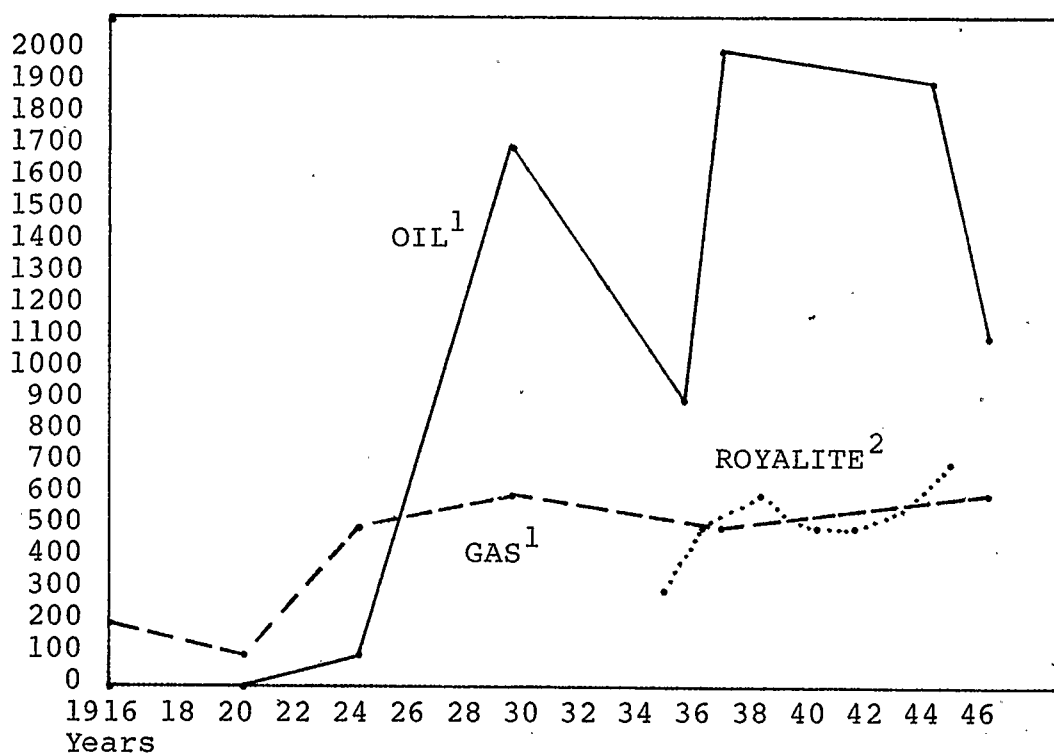
worked around the clock keeping track of operations.

Pipeline construction was by contrast seasonal and depended on the demand for product and the marketing strategy of the companies. As depicted in the following chart, oilfield employment and job security was dependent on both the occupation and the employer. Royalite employees and those involved in the gas industry fared better than the workers involved in the less stable production sector.

Illustration 2.2

Employment in oil and gas in Alberta and in the Royalite Company Ltd.

Number of employees



¹ Compiled from Mineral Production of Canada statistics, CA1/BS26/D8.

² Taken from Royalite Annual Reports for dates cited. (See also Illustration 2.5 for more details.)

IV. a. Hours of work

The Factory Act, established by the province of Alberta, controlled hours of work in Alberta. By 1926 it dictated a reduction from twelve to nine-hour working days for the oilfield drilling crews.⁷⁹ In testimony given before an investigation into the hours of work in the oilfield conducted by Judge A.A. Carpenter in December 1926, drillers W.V. Nicholson and Clarence Snyder pointed out that the eight-hour day was the standard in the California field,⁸⁰ but the Turner Valley operators were not prepared to allow anyone to force them to make the change. They pointed out that by an oversight in the Factory Act, the hours of work legislation did not even apply to gas wells.⁸¹ Drillers, for their part, still insisted on the move to a shorter working day in 1927, citing other oilfields to prove that eight-hour days not only did not cost the companies any more money due to better performance by the employees, but also improved safety at the worksite.⁸²

In spite of attempts to shorten work-weeks, by 1928 the hours of work were still long for most employees. Workers at the Royalite plant in Turner Valley found themselves working ten-hour days, seven days a week for the same pay as the unionized labour which was brought in from Calgary to build a new part of the plant. Those unionized steel workers enjoyed an eight-hour day and a six-day week; thus subsequent contact between the two groups proved enough to

force Royalite to bring its oilfield workers' hours into line with the unionized steel workers from Calgary.⁸³

Once the eight-hour day was recognized by law, demands were made for a six-day week. Although one Lord's Day Act case was taken to court, it was overturned and the seven-day week remained a common practice in the oilfield.⁸⁴

Throughout the boom at the end of the 1920s, workers continued their struggle for an eight-hour day and a six-day week. But all of their efforts proved in vain when the depression of the 1930s threw many oilfield people out of work.

Unemployment, always a problem in the oilfield, became more pronounced in the early 1930s. Men walked miles to be at the plant at seven a.m. to get a job for the day. The jobs were few and the potential workers were many.⁸⁵ R.C. Stewart at the Turner Valley Log Cabin Cafe set up an employment agency to help locals find work.⁸⁶ Not only was there little work but one Calgary lawyer, E.A. Dunbar wrote to George Hoadley, the local MLA, complaining about the unethical practices of oilfield companies. He stated that some unscrupulous companies were not paying their employees, and that once the province gained control over the resources, it should include certain conditions in the lease agreements to protect the workers.⁸⁷

During these hard times, the oilfield people depended on each other, the village governments, the oil companies and the provincial government. In 1932, Imperial Oil

reported that it aided 115 families with 576 food hampers at a total cost of \$5,328.17. It was careful to insist that this was only a temporary measure until the appropriate government agencies took over relief administration.⁸⁸

Although agencies and governments attempted to ameliorate the most severe hardships of the local unemployed, it was the discovery of oil in 1936 that returned the oilfield to a boom economy. Once again the unemployed asked for enforcement of the forty-hour week and a provincial government board of inquiry chaired by Clayton Adams suggested that the shorter work-week be implemented.⁸⁹ Days later, the Alberta Producers' Association rejected the shorter work-week as untenable.⁹⁰

Eventually the hours of work came down to a power struggle between the unemployed, the companies and their workers. According to a government report in May, 1937, some 654 unemployed workers signed a petition asking for a forty-hour week.⁹¹ They argued that a reduction in the hours of work of the employed oilfield workers would create more work for the unemployed. Although the employed workers countered with a petition of their own containing only 350 signatures they also had company support.⁹² Therefore, on June 30, 1937 the provincial board of industrial relations ruled that a fifty-six hour week for drillers and a forty-eight hour week for all other employees would apply to the Turner Valley oilfield. This special decision exempted the oilfield from Section 10 of the Hours of Work Act.⁹³

The unemployed not only wanted a change in the hours of work prevailing in the oilfield, but they also attacked Premier Aberhart for chasing capital out of the oilfield. Turner Valley residents were among the leaders of the group which signed a petition to recall Aberhart in 1937.⁹⁴ The local newspaper accused the Premier of eliminating jobs with his proposed suggestions for conservation legislation.⁹⁵ The drilling companies, often out of work themselves, had full work-crews and as many as twenty or thirty men on waiting lists to join their operations if and when work became available.⁹⁶

In 1938, the eight-hour day was once again suggested as a way of creating oilfield employment, this time by W.D. King, Deputy Minister of the Department of Trade and Industry.⁹⁷ The next year the issue was explored by a government inquiry. Predictably, companies and employed men once again opposed it, and the unemployed men still supported job-creation suggestions.⁹⁸ International events soon solved the unemployment problem. Wartime industrial demand in the following years pressured the board of industrial relations to allow longer hours, longer work weeks, and more time between days off as needed by producing companies. Overtime was paid at regular rates.⁹⁹

An editorial in the local Turner Valley newspaper in 1939 seemed to summarize the attitude of oilfield companies to their employees. Appearing during the McGillivray inquiry into Imperial Oil's control of the oilfield, the

editorial maintained that Royalite and Imperial were refusing to drill new wells because of the inquiry. The intrusion of government regulation was therefore blamed for the lack of any new expansion in the oilfield and deepening the acute unemployment problem.¹⁰⁰

The hours of work debate eventually became a challenge to the authority of the production companies in the oilfield and their financial supporters. Although a majority of the workers favoured the shorter work-week, the oil companies refused to be controlled by government hours-of-work regulations. Finally, a provincial investigation did little more than change the law to make it conform with current labour practices rather than force the companies to comply with the commonly accepted forty-hour work-week by then increasingly common throughout industrialized North America. In the end, the oil companies, not the workers or any government bodies, effectively decided the hours of work in the Turner Valley oilfield.

IV. b. The American Labour problem

Importing American workers into the Turner Valley oilfield partially caused and further aggravated the unemployment problems. In the early years the Americans were the only skilled men capable of working in the oilfield. However, even when Canadians learned the skills necessary to work on the rigs, their employment difficulties continued.

In 1929 a federal law forbidding the immigration of "contract labour" stranded in Montana a number of Americans who were on their way to various jobs in the Turner Valley oilfield.¹⁰¹ Angry officials of the affected companies lobbied the federal government so quickly that the next day the restriction was withdrawn and the Americans poured into the oilfield.¹⁰² An editorial in the Calgary Herald the following day recommended the government change its policy since skilled men were necessary in the rapidly growing oilfield. But it also noted that unskilled American workers were flooding into the valley on tourist visas and staying on to work indefinitely, thereby depriving unemployed Canadians of positions.¹⁰³ A few weeks later, a Canadian veteran of thirty years in international oilfield work stated to the Herald that Canadians were as skilled as any drillers in the world. He thereby proposed that since Canadians were prohibited by law from working in the American oilfields, that Americans should similarly be kept out of the Canadian fields.¹⁰⁴

Americans not only worked in the oilfield, they often controlled the operations. In at least one well documented case, a confrontation between an American driller and a Canadian worker resulted in violence. According to Canadian law the steam operating engineer was required to shut down his machinery for periodic inspection and maintenance. However, the American driller demanded total control of the drilling operation and when the engineer attempted to obey

the law and service his machinery he was physically assaulted by the American.¹⁰⁵

After the slow period of development in the early 1930s, the Turner Valley oilfield boomed once again in 1936. The census for that year listed 255 Americans out of a total of 969 men employed in the oil and gas industry in Alberta. The local Turner Valley newspaper repeatedly identified the American labour problem as Canadian nationals were routinely bypassed in favour of their American counterparts. First it questioned the need for importing Americans when Canadians could do the same work.¹⁰⁶ Then it went on to suggest an association for oilfield workers. The editor commented that the workers needed protection from outside labour, the oil companies and the government. Only an organization familiar with the workers' needs could adequately represent their point of view.¹⁰⁷ Complaints about Americans in the oilfield continued unabated. Finally, on July 11, 1938 N.E. Tanner, Acting Minister of Trade and Industry wrote W.D. King, Deputy Minister of Trade and Industry. Tanner asked King to investigate the issue of American drillers in Turner Valley.¹⁰⁸ The results of the investigation revealed an interesting relationship between the federal government and the oil companies.

In an attempt to control American immigration to the oilfield the Alberta government had enjoyed a longstanding agreement with the federal government that any drillers who applied to work in the oilfield would have their immigration

applications passed on to the provincial authorities for consideration. L.J. Ricks of Calgary reported to his superior, M.W. Robertson of the Alberta Employment Service in Edmonton on July 21, 1938 that the American drilling contractors, Newell and Chandler, routinely employed American drillers instead of the qualified Canadians. When drilling slowed down they laid off any Canadians first, but none of the released men would report the incident for fear of "discrimination."¹⁰⁹ Robertson thus investigated and found that no Americans had received permission from the Alberta Employment Service to work in the oilfield.¹¹⁰ His final report to W.D. King revealed special treatment for American drillers. Newell and Chandler were well aware of the immigration restrictions and the agreement between Ottawa and Edmonton. Therefore, they retained a lawyer, Eric Harvie, to go over the heads of the local immigration officials to the federal Minister of Immigration in Ottawa. Harvie subsequently received permission to import Americans for the Newell and Chandler operation. Robertson pointed out that this action contravened the existing agreement between the two levels of government, and as a result, called for immediate licensing and provincial registration of all oilfield workers in an attempt to control the American labour problem.¹¹¹

Registration of oilfield workers took place in 1938 but the problem remained unresolved. During World War II many skilled workers of all nationalities were taken up by the

war effort but the problem with American labour was never fully resolved. As late as 1950, the local trade magazine, the Western Oil Examiner still called for a limit to the number of American drillers being allowed into the Alberta oilfield.¹¹²

IV. c. Labour Organizations and Unions

Both the unemployed and those with jobs in the oilfield fought for their rights by whatever ways and means they could. In addition to voicing their concerns in letters to newspapers, petitioning the government and eventually attempting to recall Aberhart when he proved unhelpful, they formed labour organizations to lobby for their cause.

The first union which affected oilfield working conditions was the Calgary Stationary Engineer's union. In 1914 it prosecuted six engineers for working without licenses in the oilfield. Five of these men were convicted, one was acquitted and sixteen more were considered as possible cases.¹¹³ The next organization which inadvertently spurred on union activity in the oilfield was Imperial Oil. According to the Imperial Oil Review, by the beginning of 1925 almost all major production facilities in its empire included company-controlled unions called Joint Industrial Councils. According to this company monthly, these organizations "would send men about their work with the calm consciousness that so long as the industry flourished their welfare was safe... All wage adjustments

[were] made in [industrial] council, subject to the approval of the Directors." Conspicuous by its absence from the plants or refineries with industrial councils was the Royalite operation at Turner Valley.¹¹⁴ A generous interpretation of this situation would attribute the lack of a union to a harmonious relationship between the company and its employees. However, when Royalite brought in steelworkers in 1928 to work on a new section of the plant their better hours and shorter work-week exerted enough pressure upon Royalite that it changed its operation to match the unionized system.¹¹⁵

By 1929 the International Union of Operating Engineers gave a charter to a Local 957 at Turner Valley, Alberta. It boasted one hundred members and hoped to attract the remainder of the three hundred engineers who worked in the valley.¹¹⁶ The Calgary Herald mentioned its formation with twenty-nine signatures on the incorporation documents and regular meetings every second Tuesday of the month.¹¹⁷ The union lasted until the early 1930s, when its weekly advertisement in the local Turner Valley newspaper disappeared with the union itself.

The next mention of unions in this oilfield was not made until 1937. In September of that year the editor of the local paper, the Flare, called for an association to protect the workers. An outside union was neither deemed advisable nor necessary, but since the producers had experienced the protection of a permanent association since

1926, a local labour organization was considered appropriate. Its role would be to educate members on the latest technology and to persuade local companies and the governments of the necessity for better conditions in the oilfield and less interference from outside organizations which hindered development.¹¹⁸

In spite of the advice of the Flare's editor, the next union organization was not considered until 1939. In April of that year, two car loads of welders from Calgary travelled to the oilfield to start a local of the welders' union. The local paper noted that oilfield men wanted "more protection from the government for men holding papers but no good was discerned by forming a union." Without local support, the specialized welders' union had no chance of gaining a foothold in the Turner Valley oilfield.¹¹⁹

The war however, prompted action, for in July 1942 an article in the Flare announced that Jim Conroy of the Canadian Congress of Labour was coming to the oilfield. He intended to form a union with engineers and welders as founding members. All engineers, welders, drillers, roughnecks and others were invited to the first meeting at the Black Diamond Hall. The article concluded by saying, "It is to the advantage of all oil workers to attend the meeting next Monday."¹²⁰ The Oilfield Engineers and Affiliated Workers of Alberta, Local No.1 was formed at that first meeting. Fifteen men attended the first meeting, but total membership in the union was forty engineers and

welders. Wages were considered fair, but the practice of firing without just cause was given as one reason to start this union.¹²¹ By September the membership had exceeded one hundred men, monthly dues were set at \$1.00, every major oil company was represented in the membership and the editor of the Flare added that "there [was] no reason why this Union should not become a powerful factor for the betterment of working conditions in the field."¹²²

There was, however, a very good reason why the union could not "become a powerful factor" in the oilfield. Imperial Oil did not want a union and by the fall of 1943 a Joint Industrial Council was in place at the Royalite plant. Although the employees were quite uninterested in the spring of 1943, the Royalite Annual Report mentions that by December, 1943 they were involved in the council.¹²³ Their hesitancy was probably due to the fact that the council consisted of more management representatives than employee members. Although unions had attempted to work for the employees in the Turner Valley oilfield, in the end a relatively powerless company-controlled union was the only voice of the workers.

The overall record of labour organization in the Turner Valley oilfield is decidedly less than impressive. One interpretation would suggest that oilfield labour peace resulted from good working conditions and excellent pay. As will be documented below however, working conditions often left much to be desired and although wages were generally

good, a career was seldom assured. Therefore, a credible interpretation for the failure of the oilfield labour movement must include other explanations such as the lack of a dominant employer, proximity to Calgary, a general labour surplus and a free-enterprise ideology shared by management and much of the labour force.

Although Royalite was the largest and most reliable employer, it seldom employed more than a quarter of the oilfield labour force. Consequently, a class polarity which pitted all the workers against a single company's management group never developed. Next, the proximity to Calgary occasionally helped the move towards labour organization, but generally, the close ties to a metropolitan centre allowed the unemployed from across Canada to migrate to the oilfield in search of lucrative employment. This excess labour pool further prevented attempts at union organization because employers could easily hire new personnel at the first hint of labour unrest. Also, many workers willingly ascribed to the free-enterprise ideology as personified in Bill Herron Sr., A.W. Dingman and Eugene Coste, while selectively forgetting the thousands of investors who had lost millions of dollars in the hundreds of bogus companies which were formed during the various Turner Valley booms.¹²⁴ Consequently, even though the workers and the unemployed petitioned for improvement in the working hours and conditions and periodically courted the idea of labour organizations, they were opposed by the combined influences

of an almost continuous surplus of labour and the free-enterprise ideology of management and much of the labour force. This hostile climate in the oilfield mitigated against unions, controlled as it was by oil company investors, directors and managers.

IV. d. Accidents and Safety

No study of an industrial workplace can be complete without a discussion of accidents and safety. Whereas statistics for the Alberta coal industry are infinitely detailed, safety statistics for oil and gas well development are virtually nonexistent. Some would contend that the independent nature of oilfield workers would keep them from relying on government agencies for medical attention or insurance against accidental injury. Although the mythical ideal of a rugged oilfield individual persisted in some current oilfield literature, the workers consistently had to rely on the Workmen's Compensation Board for financial support in time of injury. The chart which follows depicts the different levels of premium charged to petroleum production categories and compares them with the coal mining industry, construction trades and City of Calgary occupations.

Illustration 2.3

Workmen's Compensation Rates for Different Occupations
 Rates are premiums charged per hundred dollars of pay.

COAL				OTHER INDUSTRIES			
Year	In or about mines	Employees of miners	Strip mines	Construction and general building			
1925	3.00	3.00	3.00	1.25			
1926							
1927	3.75	3.75	3.75	1.75			
1928	3.75	3.75	3.00	2.00			
1929							
	MAR ¹	MAR ¹	MAR ¹	MAR ¹			
1930	3.75	3.75	3.00	2.00 .03			
1931	3.75 .03	3.75 .03	2.50 .04	3.00 .03			
1932							
1933	4.25 .06	3.75 .03	2.50 .04	Coke ovens ¹ 3.50 .04			
1934	4.50 .07	3.75 .03	2.50 .04	MAR ¹ 4.00 .05			
1935	4.50 .07	3.75 .03	2.50 .04	2.85 .07 4.00 .05			
1936	4.75 .07	3.75 .03	2.50 .04	2.85 .07 4.00 .05			
1937	6.00 .10	3.75 .03	2.50 .04	2.85 .07 4.00 .05			
1938	5.25 .10	3.75 .03	2.50 .04	2.85 .07 4.00 .05			
1939	5.25 .05	3.75 .03	2.50 .04	2.85 .05 4.00 .05			
1940	7.00 .05	3.75 .03	2.50 .04 ²	2.85 .05 3.00 .05			
1941	6.50 .05	3.75 .03	2.50 .04 ²	3.00 .05			
1942				3.00 .05			

OIL AND GAS				OTHER INDUSTRIES			
Year	Drilling	Refining	Gas drilling and distribution	City of Calgary Employees			
1925	3.00	1.50		.50			
1926							
1927	3.00	2.25		.50			
1928	2.50	2.25		.50			
1929							
	MAR ¹	MAR ¹	MAR ¹	MAR ¹			
1930	1.75 .03	2.50 .03	1.60 .02	.50 .01			
1931	1.75 .03	2.50 .03	1.25 .02	.50 .01			
1932							
1933	1.75 .04	2.50 .03	1.25 .02	.50 .02			
1934	1.75 .04	2.50 .03	1.00 .02	.75 .01			
1935	1.75 .04	2.25 .03	1.00 .02	.75 .01			
1936	1.75 .04	2.25 .03	.75 .01	.75 .01			
1937	2.25 .05	2.00 .03	.60 .01	.60 .01			
1938	2.25 .05	2.00 .03	.60 .01	.60 .01			
1939	2.00 .05	1.50 .03	.60 .01	.60 .01			
1940	1.75 .03 ³		.75 .02	.75 .01			
1941	1.50 .03		1.00 .02	.75 .01			
1942	1.50 .03		1.00 .02	.75 .01			

¹MAR stands for Medical Aid Rate

²Strip mining and coke oven rates were combined in 1941.

³Drilling and refining rates were combined in 1940.

It can be surmised from the above information that the provincial government considered the oil and gas industry to be hazardous to life and limb, although not as dangerous as the coal industry. Coal-mining accidents often involved multiple casualties when a mine caved in or exploded. By contrast, the petroleum industry accidents were often just as spectacular as the coal incidents, but created fewer fatalities due to the less labour-intensive nature of the occupation. Therefore, for the period from 1925 to 1945 a comparison of the two industries is hard to complete. Reliable statistics from the Mines Branch show that 423 men were killed during the period and the number of employees in the coal operations averaged around the 8,000 figure. Much less reliable statistics exist for the petroleum industry. Provincial and federal census statistics list employee numbers in the low hundreds in the 1920s and early 1930s, a rise to almost 1000 in 1936 and a levelling off at almost 2000 in the wartime period. A compilation of accidental deaths in the oilfield for this time period also shows thirty-four fatalities. However, this is probably a low number since these include only the deaths reported in local newspapers. (See the following chart and Appendix A for details.)

Illustration 2.4

Injuries recorded by Workmen's Compensation Board

Year	Class	Temporary disability Total days lost	Fatal	Non-fatal
1941	15-10 ¹	10164		
	15-12 ²	657		
1942	15-10	9226	1	
	15-12	345	1	
1943	15-10	9797	7	828
	15-12	881		82
1944	15-10	12655	1	878
	15-12	738		76
1945	15-10	10834	8	797
	15-12	831		121

¹Drilling for and operation of gas and oil wells, refineries, and absorption plants. Manufacture of paints and chemicals, boring, drilling and sinking of artesian wells and natural ice operations.

²Natural gas distribution.

Deaths in the oil and gas and coal industry.

Year	Oil ³ and gas ¹ Deaths ²	Coal		
mining ³ Deaths	employees	employees		
1925	471	1		
1926	820	1	8763	39
1927	921	2	9016	26
1928	1309	1	9496	28
1929		3	9572	31
1930	2231	2	8889	11
1931	1409		8070	16
1932	744		7837	11
1933	920	4	8042	6
1934	1125	1	8143	15
1935	1116		7800	35
1936	1301		8110	11
1937	1880	3	7836	20
1938	2085	3	7411	21
1939	1995	3	7456	17
1940	2013		7416	13
1941	2168	2	9229	48
1942	2154		8040	17
1943	2379	5	8636	25
1944	2396		8375	10
1945	1691	3	8309	23

¹Taken from Mineral Production of Canada, CA1/BS26/D8

²Taken from newspapers, the local history and the Workmen's Compensation Board reports for the years cited.

³See Appendix A for more details on these accidents.
³Taken from the Annual Reports of The Mines Branch for Alberta for the years cited.

The danger of oilfield work is, therefore, proven. Understanding why it was so dangerous is less obvious. As detailed in Appendix A, most deaths and severe accidents were caused by drilling accidents or explosions. Some drilling was contracted out to independent companies on a set fee per vertical foot of hole. This pressure caused the crews to rush and oftentimes promoted carelessness. In addition, drilling was by its very nature dangerous. Moving parts on machinery were often exposed, hours were long and fatigue combined with carelessness often proved fatal. Explosions were also common due to the high pressure of the gas and its unpredictable pressure fluctuations. Residents and workers grew callous to the dangers and flirted with death or serious accident almost daily. Finally, waste gas was flared throughout the area and leaking lines periodically exploded without warning. These explosions made the pervasive toxic sour gas all the more hazardous.

Responsibility for oilfield safety was nearly impossible to identify. Although as the following chart shows, Royalite was the largest single and steady employer, it accepted only limited responsibility for its own employees and those of its subsidiaries, and none at all for those in the remainder of the field. The smaller companies had fewer employees, even less concern for safety and often contracted labour or drilling out to other firms. The contractors similarly were even less cognizant of the safety

Illustration 2.5
 Royalite Oil Company employees 1935-1950.

Year	Number of employees	Number at war
1935	345	
1936	342	
1937	502	
1938	651	
1939	529	
1940	491	
1941	527	67
1942	539	160
1943	547	252
1944	Information on the numbers of men involved not published for 1944 and 1945.	
1945		
1946	697	224 veterans return
1947	657	
1948	625	
1949	599	
1950	530	

Information taken from the published annual reports of the
 Royalite Oil Company for the years cited.

conditions because their profit margins were determined by successful completions of well footage within strict time limits. Furthermore, drilling contractors usually hired workers for the job at hand and laid them off when the contract was completed. Therefore, workers were often unsure of both safety and employment.

Many of the same factors which rendered unions powerless in the oilfield also contributed to the unsafe working conditions. No dominant employer could be held responsible for working conditions throughout the entire oilfield, and an injured worker could be easily replaced with one of the many eager unemployed. In addition, the often less than amicable relationship between the oil companies and the provincial government discouraged any further intrusion into the industry with safety regulations which would have further incensed the defensive corporations. Finally, accidents were generally accepted as part of the exciting flavour of oilfield work: incidents to be avoided but not to the detriment of the oilfield development process.

Conclusion

Considering the nature of the significant resource produced at Turner Valley, it is not surprising that many forces sought to influence the development process. However, not all resource communities experience the intense level of control which dominated the workplace in this

oilfield. A comparison with a coal-mining community can help illustrate this relationship. Because of its proximity to Calgary, the Turner Valley oilfield consistently attempted to view itself as independent of external controls and consequently allowed subtle but perhaps even more powerful metropolitan forces to control its development process.

Whereas a coal-mining community in a remote setting would be forced to rely on a company-owned or national railway for a transportation linkage to its markets and suppliers, this oilfield's proximity to Calgary forced it to accept an inadequate road linkage while the various levels of corporations and governments quarrelled about their respective transportation responsibilities. Coal, once extracted from the earth, required little or no processing while both oil and gas needed refining and specialized pipelines before they could be used by the consumers. The demand for this complex and expensive additional processing attracted further control over the production cycle.

The more hazardous labour conditions in coal mines also created the need for close government control and labour unions. In this oilfield the steady supply of willing new workers from the ranks of the urban unemployed and the American oilfields along with the concerted union-breaking strategy of the companies created a workplace, close to Calgary, where unions were weak. Also, although the government constantly monitored coal mine safety, it would

not, or chose not to in the case of the oilfields, because of tension between the government and the fiercely independent oil companies. Any legislation concerning oilfield safety was thus either rewritten to please the oil companies or merely ignored.

Therefore, although a coal-mining community might be considered the typical controlled resource community, the intense relationship between external forces and the oil production process created a climate wherein all aspects of the workplace were dominated by the corporations, governments, suppliers and consumers who were interested in the resource. In the Turner Valley oilfield, Imperial Oil's dominance of oilfield development, society and culture through its various subsidiaries was undisputed. Even though it was not the single employer, its powerful position in oilfield culture set the example for other companies to follow. Time and again, legislation was passed to control specific oilfield problems and Imperial's negative response encouraged the independents to disregard these government controls. Considering Imperial's predominant influence on the workplace, its effect on the remainder of oilfield life is not unexpected.

FOOTNOTES - CHAPTER TWO

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- ⁴ Herald, August 11, 1921 and June 8, 1928.
- ⁵ Flare, October 8, 1937. See Susan Kooyman, "The Politics and Legislation of the United Farmers of Alberta Government, 1921-1935," M.A. University of Calgary, 1981.
- ⁶ Ibid., April 28, 1939. See also chapter 1, page 15.
- ⁷ Herald, February 26, 1927.
- ⁸ Ibid., May 23, 1927.
- ⁹ Western Oil Examiner (Calgary, Alberta), August 20, 1927.
- ¹⁰ Herald, June 17, 1929.
- ¹¹ Daniel Ingram Istvanffy, "Turner Valley: Its Relationship to the Development of Alberta's Oil Industry," M.A. Thesis, University of Alberta, 1950, pp. 114-116.
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- ¹³ Ibid., p. 206.
- ¹⁴ Herald, July 3, 1929.
- ¹⁵ Ibid., July 17, 1929.
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- ¹⁷ Western Oil Examiner, October 2, 1926. For more information on the conversion of railways from coal and fuel oil fired locomotives to diesel-electric power see Murray W. Dean and David B. Hanna, Canadian Pacific Diesel Locomotives: The History of a Motive Power Revolution (Don Mills: Fitzhenry and Whiteside Limited, 1981), pp. 8-9 and

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which the reasons for establishing the industrial plan are mentioned.

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CHAPTER THREE

SOCIO-ECONOMIC DEVELOPMENT OF THE OILFIELD COMMUNITIES,
1929-1945

The resource development process necessarily affects the social development of the local culture. Typically, resource towns or areas are remote, serviced by a monopolized railway and are usually patronized by the single employer which is largely responsible for the development. The historical literature on resource towns refers to three distinct development time-periods. Before 1920, resource-town development was largely unplanned and haphazard, and required that all housing be within walking distance of the worksite. During the interwar period planning became more important as governments and/or companies purposefully laid out the resource communities. The third period, after World War II, was characterized by even more planning, control by provincial regulations and a highly structured physical town plan.¹ Although these development stages indicate increasing levels of organization during each successive era, economic controls also affected the development process. Dominance by various levels of economic forces, whether local, provincial, national or international, often added further complexity to the process.

The most complete analysis of the resource town, however, must also include the effects of uneven development

caused by various market and political forces: the effect of the internationalization of capital and the growth of multinational corporations; the increasing mobility of various forms of resource development capital; as well as the effects of political demands by various levels of government. Although the history of resource towns seems to indicate an increasingly complex interrelationship between these forces over time, the Turner Valley oilfield communities seem to fit best into a development model which includes aspects of all three development periods mentioned above. While the long development period under discussion is partially responsible for this complex process, the forces of national and international governments, corporate and market forces effected the strongest control on this first Western Canadian oilfield throughout the entire development period.

Government policies decided in London, Ottawa and Edmonton, in addition to business directives dictated by London, New York and Vancouver combined to direct and affect the development process in the Turner Valley oilfield. It is not surprising, therefore, that the cumulative effects of numerous exogenous influences together created enormous changes at the level of the individual oilfield worker and his family. Almost every sector, such as transportation systems and settlement, housing and health-care, politics and business, education and recreation, religion and crime, were all moulded by direct contact with the industrial

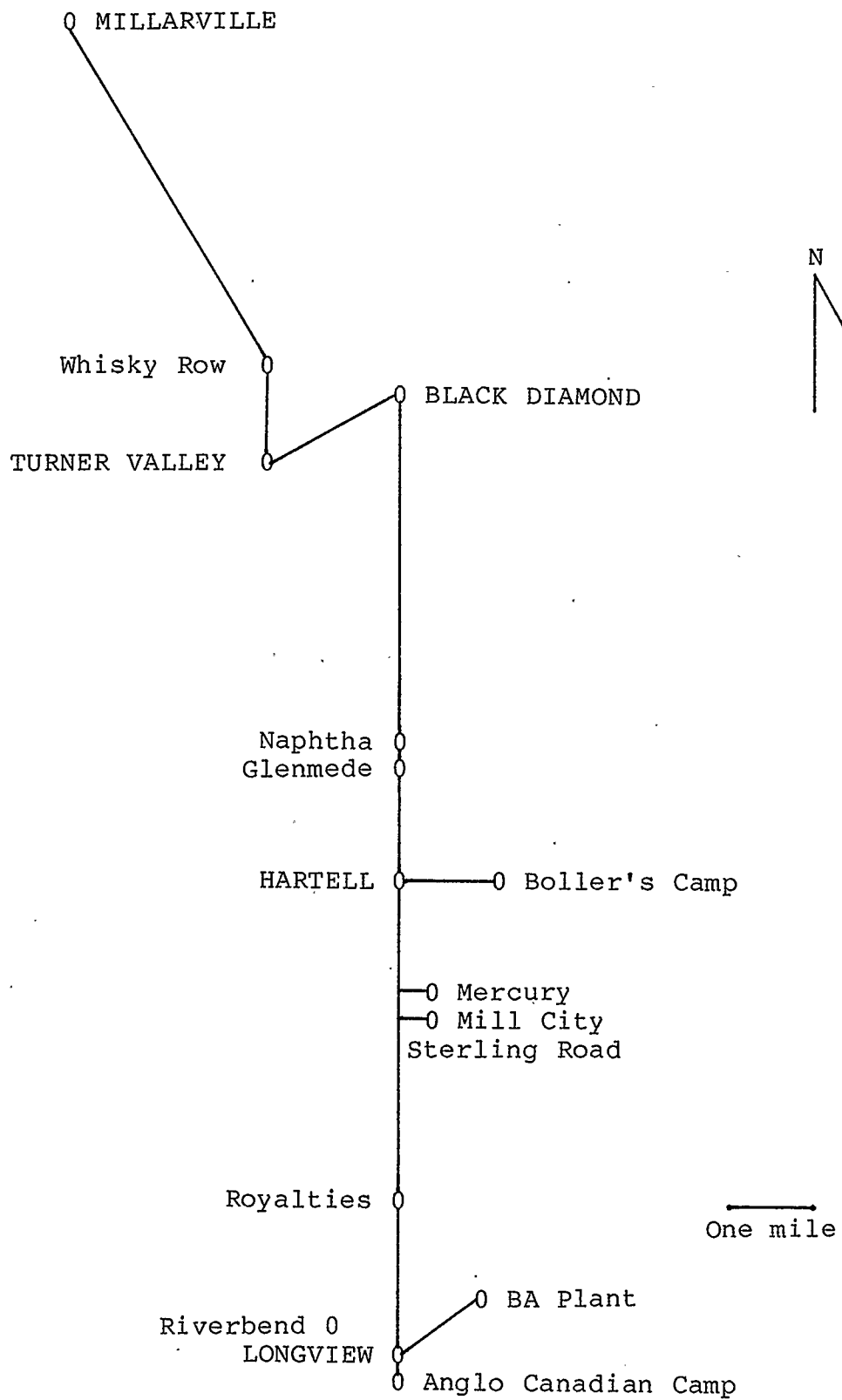
development process.

I. TRANSPORTATION AND SETTLEMENT

Although impassable roads routinely halted oilfield development, the lack of a reliable transportation system was also detrimental to the individual oilfield inhabitants. Since the oilfield was close to Calgary and the pipelines which delivered petroleum products to market effectively obviated any need for a reliable all-weather road system, the call for improved roads went largely unanswered. Railways might have given the people reliable access to the city but they were deemed economically impractical since passenger traffic alone could not support the costly rail system. Oilfield workers therefore moved their families to the worksite or a nearby settlement. Since no single company controlled all oilfield operations the workers arranged their own transportation as best they could.

No public transportation was available to oilfield inhabitants until 1930 when a bus began regular service to Turner Valley. The bus line ran until 1934 and was revived in 1936 when the boom at the south end of the field once again made it viable. Various operators ran the service during the period up to 1945, but in each case the Calgary to Turner Valley run was owned by a Calgary company.²

Illustration 3.1 Map of Turner Valley Oilfield Communities



The tenuous transportation linkages with Calgary and other centres directly affected the settlement development process. As the oilfield went from boom to bust, villages and smaller settlements sprang up to meet local needs. Three types of communities can be identified in this resource extraction area. First, there were settlements of a permanent nature which grew and shrank in response to fluctuating economic fortunes. Second, there were numerous less permanent settlements which burst into a brief existence in response to the drilling activity, and finally a group of communities which were little more than squatters' sites near the operations of a single oil company and faded quickly when the operator went out of business or moved on to a new area.

I. a. Permanent settlements

Two oilfield settlements qualified as examples of the permanent category surviving beyond the oilfield era. The twin villages of Black Diamond and Turner Valley were the first official settlements in the oilfield. In 1907, Black Diamond was established as a mail distribution point for the local farmers. This village already had telephones, stores, a blacksmith and a butcher, hotels and restaurants by the time the new oilfield blew in during 1914, causing the Turner Valley townsite to flourish with activity.³

By 1929, both villages were locked in head-to-head combat for supremacy over oilfield population and services.

Black Diamond boasted a large lumber yard, rooming houses, churches, numerous houses and all the services necessary to provide for the needs of the new immigrants.⁴ Not to be outdone, Turner Valley attracted a police detachment, built sidewalks and provided parking, and arranged to receive electricity as had its rival.⁵ Banks, doctors, lawyers and dentists also frequented the oilfield, setting up practices in one community or the other.⁶ Turner Valley had, by the 1920s, the dubious distinction of attracting so many people that numerous squatters' suburbs and slums grew up around the authorized townsite.

By 1930 both villages were incorporated but within a few months declared bankruptcy. Although they suffered from a population exodus in the 1930s caused by growth in the south end of the field, the 1940s proved to be fruitful years for Black Diamond and Turner Valley. During the war, the plant in Turner Valley was turned up to full-production capacity, more equipment was installed and a heady growth reminiscent of the late 1920s revived the depressed villages.

I. b. Temporary settlements

The second category of settlement consisted of three communities, often named after a local resident or the oil company responsible for the local boom. In each case, the community grew in response to a demand for housing and shelter for the workers and their families. The provincial

government attempted to control the growth of impermanent oilfield communities by designating specific locations as the only legal settlements. Rather than alleviating the problem of uncontrolled development, the government order only served to further aggravate the problems. The lots in the designated townsites sold too quickly or were too expensive for oilfield workers and, consequently, many merely squatted on any vacant land nearby. Oil companies also built their settlements near the rigs or refineries, lending even more instability to the volatile character of oilfield settlements. Finally, the impermanent and sometimes illegal villages proved even more dangerous to live in than the designated settlements because no sanitation, health or safety inspections were provided for communities which, according to the law, did not exist. These various settlements are dealt with below in chronological order of formation, but also with a view to hierarchies of size, proceeding from the larger to smaller settlements, from those which became viable townsites to those squatters' sites which dotted the valley.

Hartell

First named Hartell's Corner and then Hartellville, the first major settlement south of Black Diamond sprang up after twenty rigs moved into the area six miles south of Black Diamond. The first newspaper account in the summer of 1929 mentioned a store, a pool hall, a barber shop, a 32' x

60' restaurant in the construction stage and a petition for a post office.⁷ A week later a laundry and dry cleaners was in the construction stage as numerous men from Oklahoma filled the bunkhouses to overflowing.⁸ By the end of the year a butcher shop, garage,⁹ dairy, power line¹⁰ and two lumber yards were built, cottages were put up for rent,¹¹ and some two to four hundred people filled the burgeoning community which now spilled over into the surrounding area.¹² A federal post office opened in 1930,¹³ more stores moved in and some Black Diamond residents moved into the recently authorized townsite.¹⁴ During one month in 1931, in addition to growth caused by immigration, nine live births were recorded in the new settlement.¹⁵ A branch of a Calgary drugstore also provided the residents with minimal medical facilities beginning in 1934.¹⁶

Seller's General Store was built in Hartell during 1937 and later moved to Longview during the boom at the south end of the field.¹⁷ Although Hartell was eclipsed by later development, it benefitted from the services of a church which was moved in during 1941, only to be consumed by a fire in 1944.¹⁸ As late as 1944, the hardy people of this small community built a new village hall, even though their settlement was by now past its prime.¹⁹

Royalties and Longview

The two south-end villages of Little Chicago and Little

New York were the most like a frontier boom-town in their personality and development. Both owed their existence to the Turner Valley Royalties No. 1 well which had made the area famous as the first commercial deposit of crude oil in western Canada. Only two miles of land separated the village on top of the hill, later named Royalties, from the riverside community below, officially known as Longview. In September 1936, the only business in the lower area was a "Chinaman's" restaurant near the river. A mere eighteen months later, the two communities boasted eight restaurants, all brimming with customers.²⁰ A slough in Royalties qualified as a body of water to the Vancouver developer who sold land around the swamp as prime "lake-front" property.²¹

Construction was most frenzied in 1937 when twenty-one new structures were reported in various stages of construction in one issue of the oilfield newspaper.²² In addition to the lumber yard, pool room, barber shop, meat market, garage, boarding house and hotel which sprang up in most new communities, the "Twin Cities" also attracted such services as weekly dental visits on Mondays,²³ and offered the cultural sophistication of a radio link with Calgary, a skating rink²⁴ and a theatre.²⁵ In a move which symbolized the mobility of oilfield businesses and people, the Hudson's Bay Company store was moved from one side of the street to the other one morning and opened the same afternoon for business.²⁶ In 1940, the community people

built themselves a nine-hole golf course and ninety men signed up to use the facility.²⁷ With their relatively abundant services and a combined population which exceeded 3000 people, these twin communities survived well into the 1940s.

I. c. Work camps and squatters' sites

A number of communities fell into the category of work camps or squatters' sites. The primitive squatter site in earlier development in the Canadian West was determined by proximity to important locational determinants such as rivers or trading posts, and later, railways. The Turner Valley oilfield sites, by comparison, were decided by proximity to drilling sites and industrial workplace.²⁸ Such shack towns dotted the landscape from one end of the valley to the other, wherever work sites were scattered.

Whisky Row

One mile north of Turner Valley, at the corner where the road turned west, squatters established Whisky Row. Never legally recognized as a townsite, the land was merely rented from a local oil company. Apparently named after locally brewed spirits, the community consisted of as many as twenty-seven houses. These included everything from tar-paper shacks to complete wood-frame structures. Without water or most of the other services common to oilfield inhabitants, the residents accepted the primitive conditions

in exchange for low rent. Perhaps 150 to 200 oilfield people called this area home from the late 1920s well into the 1940s.²⁹

Naphtha

Located four miles south of the Black Diamond corner, Naphtha was actually two settlement sites. The first was a mile west of the north-south road between Black Diamond and the south end while the second was located immediately east of the same road. The original settlement was built to house the men working at the six Home Oil wells which were drilled in the late 1920s on section twenty across the road. The settlements thrived well into the 1940s because an additional eighteen wells were drilled on this same section in later years.³⁰

Glenmede

Originally the site of the first area school in 1907, Glenmede grew with the oil boom during the late 1920s and again in the 1930s. Never a large settlement, it served as a community centre and an educational focal point for many years.³¹

Boller's Camp

In August 1929, a convoy of drilling crews and their families moved into the oilfield from Oklahoma. They set up shacks and houses a quarter mile east of Hartell. Named

after the contractor, Mr. J.A. Boller, the temporary camp provided yet another place to live,³² except that in the spring of 1930 the Boller family itself moved into Hartell.³³

Mercury

From 1928 to 1930 the Mercury Oil Company drilled seven wells in the section of land a mile and a half southeast of Hartell and the community which arose adjacent to this activity was given the company's name. In 1928 there were eight bunkhouses, a large cookhouse, four small shacks, numerous tents and even more cars. Sidewalks and other amenities also graced the settlement.³⁴ The first newspaper account of this community appeared when a fire consumed a local residence.³⁵ The continued life of this community was ensured with the arrival, during the summer of 1934, of a complete absorption plant from the United States. The plant processed some 80 mcf. of gas per day, taking off liquid naphtha, or light gasoline for sale to motorists.³⁶ The company further sponsored the construction of a community hall in 1938,³⁷ and employed many people well into the post war period.

Mill City

Mill City also drilled during 1929 and 1930 in the same section of land as the Mercury Oil Company, just south of the Mercury wells. These employees also lived in a hamlet

named after the employer. Company housing, a bath house for each sex, "paved sidewalks," and a golf course,³⁸ were provided as ammenities for the oilworkers and their wives.³⁹

Mercury School and Sterling Road

The Mercury schoolhouse sat in the same section as Mill City. The three school buildings served the local children through grade nine after which they went to high school in Royalties. The mile west from Mercury School to the main road to the south end was lined with houses and shacks on both sides, and was named after the Sterling Pacific Oil Company which had drilled nearby, from 1929 to 1932.⁴⁰

Other South End Communities

Late in 1935 the British American Oil Company built a plant six miles south of Hartell and one mile east of the Longview community. The \$300,000 facility, known as the "BA" Plant, was surrounded by a small community.⁴¹ South of Longview, in the floodplain of the Highwood River, the Anglo Canadian Oil Company built houses, warehouses, garages and offices for their field operations.⁴² Situated close to Longview, the Anglo Canadian camp operated as another peripheral community from the late 1930s on. North and west of Longview lay the settlement known as Little Philadelphia or Riverbend. As many as twenty-five families rented land from a local rancher and built small but practical

dwellings.⁴³ This community lasted only to the end of the war as did a few other even less permanent settlements which had sprung up between named communities. These also boomed during the period from the mid 1930s until the end of World War II, when they too quickly disappeared.

Millarville and the North End

Although the north end of the field was drilled as early as any other areas of the oilfield, increased activity in the decade following the outbreak of World War II caused this area to proliferate with small communities.

Millarville became the centre of a housing boom as the Home Oil Company wells were drilled. Twenty-five homes sprang up on a farmer's land only to be followed by twenty on another ranch, then another dozen at Bullville, and twenty-five more at Majorville. The usual services such as stores, garages, machine shops and restaurants arose to meet local demand.⁴⁴ No doubt many of these residents arrived from settlements near the depleted wells further south in the field.

A number of factors distinguish these temporary settlements from the more stable villages at Turner Valley and Black Diamond. Each community had sprung up close to a drilling or production facility, and consequently, housing and business facilities reflected the temporary nature of such settlements. Once the drilling was complete or the refinery closed, the residents moved on to yet another

boomtown or out of the area to a new oilfield elsewhere in northern or western Canada. With the exception of the small surviving service and supply centre at Longview, all of these temporary settlements ceased to exist after the development period.

II. LIVING CONDITIONS

a. Housing

Living conditions were dictated, in part, by the housing, heating, sanitation and health facilities in the oilfield. Tents were the earliest type of accommodation used by oilfield workers, first serving as both rooming-houses and restaurants. Even as late as 1929 members of one family lived in a tent when they arrived in the valley. As time and money allowed, walls and a roof were eventually built around the outside of the tent.⁴⁵

After 1921, the Royalite Oil Company supplied bachelors' quarters for its men.⁴⁶ Other men stayed in the large log cabin in downtown Turner Valley. Measuring 64' x 36', this two-story structure served many purposes. In the early years it was divided into eating areas on the main floor and a large open sleeping area upstairs. Up to fifty men inhabited the cabin at one time, each being allowed 36 square feet of floorspace for cots and personal effects. As shift work was common in the oilfield, beds were often shared by two or even three shifts of tired workers.⁴⁷

The Black Diamond Hotel, built in 1930, also housed numerous oilfield workers.⁴⁸ Many of these men were residents of Calgary, leaving their families in the city while they worked on the rigs or the pipelines. In most cases the situation was temporary. Once the husband built a house with the help of friends after work, the family was moved out to the field.⁴⁹ In some cases the wife still worked in Calgary, but in others the spouse never moved to the valley. In one case, the husband worked in the oilfield from 1929 through 1945, while his wife lived in Calgary for the whole time.⁵⁰

Even in Calgary, housing was sometimes less than ideal for the families of the oilfield workers. In one city review of decrepit housing, the inspector reported high rents and overcrowding as common, and subletting to other tenants was the order of the day. Two units in one building were rented by the families of oilfield workers, and the inspector concluded that these families could afford better housing.⁵¹ However poor the conditions in the city, the workmen generally travelled into the city on the weekends or days off to bathe and to visit their families.⁵²

In the oilfield, well-built housing was available to those who could afford it. A local lumber yard advertised ready-built houses starting as small as 24 square feet.⁵³ A new 18' x 22' house sold for \$352 in 1938.⁵⁴ A 1939 review of the Black Diamond village mentioned thoroughly modern houses each valued at more than \$1000 and some were

noted as having stucco and paint, water systems, and even lawns. Most residents drew their water from shallow surface wells and the reporter speculated that more permanent residences could soon be expected.⁵⁵ Lots were rented from local people, for one report to the Department of Municipal Affairs mentioned a landlord renting to forty-eight tenants. In spite of the local newspaper's account of the relatively high value of some of the homes, most were quite small. One residence measured 8' x 9' and another 8' x 12', and the government report emphasized that these were real measurements, not estimates.⁵⁶

A Dominion government housing plan which might have helped oilfield people build more permanent houses failed because of Alberta's political climate after 1935. In an article in the High River Times in 1938, a mortgage lender who was making funds available for construction in other provinces stated that he could not risk the possibility of losing his money because of the Social credit banking and credit legislation of 1937. Consequently, he could not lend money to people in the High River or oilfield area.⁵⁷

Once a structure was built, the family might also find itself forced to move at almost a moment's notice. Consequently, moving companies did a good business in the valley. One mover claimed he could move a house and have it ready for habitation, all in one daylight period. This included not only the transfer of the building, but also the digging of a new privy pit for the outhouse.⁵⁸

The provincial government, for its part, attempted to restrict the uncontrolled growth of oilfield communities by limiting the number of townsites. Although it allowed the oil companies to build and maintain facilities for their own crews near the construction or drilling site, the government discouraged development outside of designated townsites. Indiscriminate development would, in its view, promote fragile commercial development and add to the already hazardous living conditions if people built too near a well. Also, housing in the corridor from Black Diamond to the south end was likely to interfere with future drilling and exploration work. Consequently, the government authorized only specific townsites for development.⁵⁹

Yet as many people, both workers and managers, lived outside the designated areas as in them. The Royalite Company built a subdivision one mile southeast of the Turner Valley townsite for its management. Royalite Hill, also known as Snob Hill, consisted of a tree-lined main street flanked by twenty houses. A company golf course completely surrounded the elite community. A fire commissioner's report in 1941 listed the buildings as fully modern ones in the \$5000 to \$6000 range. Fire hydrants, a good supply of water and an trained volunteer fire brigade provided protection against the fires so common in the rest of the valley. The inspector classified the area as a first-class insurance risk, well qualified to receive a special rate.⁶⁰

Other residents of the valley were less fortunate. Just below the crest of the hill, in the floodplain of the Sheep Creek, lay the settlements of Dogtown and Poverty Flats. Dogtown was named after the numerous pets which roamed the area. Poverty Flats probably took its name from its comparative relationship to the rich suburb on top of the hill. While in fact, few residents of the other settlements in the Turner Valley area had the facilities common to those of Royalite Hill, the residents of the floodplain additionally braved periodic floods. In each case houses were lost to the floodwaters and families often had to be rescued from the ravages of the swollen river.⁶¹

II. b. Heating and cooking fuel

Housing location and building size varied according to area and class. All residents of the valley, however, relied on gas for heat during the long cold winters. Waste gas from the wells was routinely flared since the supply far exceeded the demand. Local residents tapped a nearby gas line as it ran across the ground and ran pipes into their shacks or houses. Sometimes a flat monthly fee was paid for the gas, but often it was not paid for and the illegally tapped gas was not missed by the company. At the house a line was connected into the stove for cooking, a mantle was attached to a pipe suspended from the ceiling to provide light, and a space heater provided heat for the occupants. Next, a line was run out to the outhouse for heat and

another into a pit to burn refuse. In the days before engine block heaters the oilmen sometimes built a small warming pit with a flare in it, covered it with a piece of sheet metal, and parked their cars over it.

At first, the gas supply was not only unlimited but unregulated by any government body. Eventually the Board of Public Utility Commissioners passed legislation requiring that all gas used for domestic purposes be scrubbed of dangerous hydrogen sulphide. One oil company cut off the gas in February, 1940 and told customers to get it elsewhere.⁶² In the south end of the field, the company which supplied gas to the consumers circulated a notice that all future gas was to be scrubbed and because it had to be purchased from the Royalite Oil Company, the price would increase.⁶³

On the surface, the provincial legislation appeared to protect the consumer against deadly gas. However, loyal Social Credit party members in the oilfield wrote Premier Aberhart explaining the local situation. One correspondent noted that the houses were only temporary in nature and, therefore, poorly insulated. Since all other costs were high, from land rental to electricity and lumber, additional gas payments would be prohibitive.⁶⁴ Two other writers were extremely critical of the government action and suggested that since Royalite had a monopoly on gas distribution the recent government directive looked suspiciously like company-sponsored legislation.⁶⁵

The relationship between the gas users and the oil companies was tenuous at the best of times. Internal government correspondence revealed that the company which supplied gas to the south end of the oilfield demanded that customers sign a waiver form releasing the company from any liability in cases of explosions caused by gas.⁶⁶ This company practice of laying total responsibility on the consumer for gas safety was, in the users' view, patently unfair. As indicated in Appendix B, ordinary oilfield inhabitants often suffered as a result of accidents caused by unregulated and unsafe gas.

The causes of these accidents were numerous. Gas-line pressure regularly fluctuated as high as 250 psi. and was often cut off without notice. Once line pressure was restored, those homes without modern automatic shut-offs on gas regulators in case of loss of pressure, filled with gas. If the structure was not properly ventilated before the inhabitant attempted to relight the gas appliances, the building blew up, often causing serious injury or death. Once an explosion occurred, the accompanying fire levelled whatever was not lost in the initial explosion. Fire-fighting equipment, where available, was also primitive, and the Royalite firefighting wagons were not sufficiently mobile to respond to fires in most of the oilfield communities. Since houses were often built close together or near production or refining operations, the risk of fire was further increased. Finally, the structures themselves

were usually of poor quality, as attested to by one inspector who found houses wired without insulation and lined with fire-prone paper rather than fire-retardant gypsum board.⁶⁷

Consequently, accidents with gas were numerous and often debilitating or fatal to the people involved. Although the homeowner shared part of the responsibility for the safety of the gas used in the home, the gas companies were careful to absolve themselves from any responsibility for injuries caused by gas sold to consumers.

II. c. Water and sanitation

Water supply provided some unique problems of its own to Turner Valley communities. Although the gas plant in the village of Turner Valley provided water for the residents of its own suburb, all other workers had to make their own arrangements. Much of the population relied on local rivers and streams for their drinking water, although in Turner Valley this supply was augmented by shallow wells and springs. After the village was formed in 1930, the Turner Valley council attempted to legislate some order into the haphazard water-distribution system.⁶⁸ Although someone was designated to distribute the water, during 1930 all drinking water in the village was condemned.⁶⁹ Black Diamond also suffered from poor quality water, bad enough to attract the attention of the oilfield newspaper.⁷⁰ By 1931, however, good wells were found in the vicinity and the

people of Black Diamond could thereafter rest assured of a safe water supply.⁷¹

At the south end of the field, water was delivered by truck from the Highwood River. One resident remembers helping haul water up the stairs at the many boarding houses.⁷² Baths were usually taken at home but on at least one worksite a shower was set up using hot water from the steam-powered boilers.⁷³

Sewer facilities were little better than the water services. Outhouse privies were often placed much too close to the homes and the wells. Multiple dwellings on one lot were also common and consequently, in 1930, outhouse pits were outlawed in Turner Valley. The village council ordered each resident to fill in the outhouse pit and buy a galvanized toilet can worth \$2.90. These were emptied by the scavenger, a man whose unenviable task was to haul the sewage and garbage to a dump located west of the village.⁷⁴ Violation of this by-law brought at least one documented conviction.⁷⁵ However, once the economic downturn of the 1930s forced the village council to resign in 1931, the sanitation in this village returned to its former haphazard standards.⁷⁶

Throughout the valley, garbage was routinely burned in a gas flare pit outside the back door of the dwellings. In an effort to make the Turner Valley a safer community, the village council outlawed the flares in 1930. A year later another by-law made flaring after six in the evening

illegal, recognizing that total prohibition of flares was impractical and hard to enforce.⁷⁷ Nearly a decade later, in 1939, the Conservation Board outlawed flares in accordance with the new conservation legislation and south-end residents promptly complained that garbage was accumulating since it could not be disposed of in the flare pits.⁷⁸ The ensuing sanitation probe called for waste containers and a weekly garbage collection system. It also noticed that although the flares had burned the garbage in the pits, a sludge of grease lay at the bottom of these pits, and underneath this lay an infestation of maggots. Once the garbage collection system was in place, the local newspaper reported that all the flies were gone and the south end was quite clean.⁷⁹

Sanitation in the oilfield was, therefore, adversely affected by the industrial development process. Oil companies took little or no responsibility for water and sewer, and feeble attempts by local and provincial governments did little more than aggravate the situation. The numerous illegal settlements were no more able to control sanitation standards than the few legitimate communities. Since neither the private nor public sector was willing to accept responsibility for oilfield sanitation, the inhabitants lived in conditions which varied from marginal to abysmal.

II. d. Health and medical services

Health in the oilfield directly reflected the living conditions and the medical care available to the sick and injured. Until 1928, the seriously injured and sick travelled to Okotoks or Calgary for treatment. In February 1928, Royalite hired Dr. A. Hall as company physician,⁸⁰ and continued growth attracted more medical personnel to the oilfield. In 1929, Royalite established a first aid station at Naphtha.⁸¹ Two doctors established practices in the valley that same year, when Doctor Weissgerber moved into a 18' x 32' building in Black Diamond,⁸² and Dr. Kenny worked out of an office in Turner Valley.⁸³

In addition to doctors, other medical personnel were attracted to the oilfield. A dentist held weekly office hours in each of the two main villages.⁸⁴ Another dentist shared quarters with the doctor in Black Diamond,⁸⁵ and an Okotoks dentist advertised in the Black Diamond paper, hoping to attract oilfield people to his practice.⁸⁶ Nurses also moved into the communities and offered limited medical attention and midwife services.⁸⁷

Medical care suffered markedly after the second oilfield boom ended in 1931. With the exception of Dr. Kenny, all the doctors moved out. Correspondence between Dr. Kenny and the officials in the Municipal Affairs Department charged with the responsibility of taking care of the bankrupt area shows that few patients were able to pay for treatment. The overworked doctor was in poor health and claimed that the medicine which he dispensed free to his

poor patients had cost almost as much as his own salary.⁸⁸ The village of Turner Valley managed to pay him fifty dollars on at least one occasion but by the fall of 1934 when an epidemic broke out in the valley, he had to be called out from his new residence in Calgary to investigate.⁸⁹ As the area went without a doctor for some time in the mid 1930s, the general health of the communities suffered further. In 1936 a resolution was passed by the Okotoks-High River Social Credit League that a medical officer be appointed for the oilfield to insure that epidemics were investigated and quarantines enforced.⁹⁰

With the renewed activity in the late 1930s, more medical professionals came to the field. Dr. Harry Lander and his cousin Dr. David Lander served the oilfield people from their offices in Black Diamond. Once again the itinerant dentists appeared in the oilfield and worked out of the south end communities for one or two days each week.⁹¹ Finally, in 1943, Dr. Harry Lander was appointed as the provincial Medical Health Officer for the oilfield district, and was charged with keeping the area safe and sanitary.⁹²

The medical professionals had many types of diseases to treat in the oilfield. In one case, a family was told to move away because the "residue in the air" was causing respiratory problems for the wife.⁹³ Epidemics were also common. From 1930 to 1945 epidemics of smallpox, infantile paralysis, measles, sleeping sickness, mumps, jaundice and

scarlet fever swept through the district.⁹⁴ In many cases the disease was spread by unsanitary conditions and through contact between school children. Often, in order to control the spread of the epidemics, schools were closed and houses quarantined.

On a less dramatic level, minor disease caused much discomfort. On June 1, 1938 the Okotoks-High River Health Unit, the first in Alberta, was established as a direct result of the efforts of the previous MLA for the riding, George Hoadley. An immediate study of local children revealed some startling facts. One quarter of the children suffered from malnutrition or had poor vision, and 50 to 75% had bad teeth. Of the 300 children examined in the oilfield, 182 "defects" were found.⁹⁵ A provincial government agency eventually stepped in to counteract and prevent these medical problems. Well-baby, prenatal and life extension courses were held quarterly in Turner Valley and Black Diamond beginning in 1931, and again from 1937 to 1945.⁹⁶ Baby clinics, dental clinics in the schools, Red Cross first-aid classes, home-nursing clinics, and mobile x-ray exams helped prevent the everyday diseases so common to the area.⁹⁷

Hospital facilities arrived on the scene very late in the oilfield's development. Doctors gave what help they could in the early days but serious accident cases were forced to travel to Calgary, oftentimes not surviving the long and bumpy journey. A few drugs could be acquired from

the drug stores in Turner Valley or Hartell,⁹⁸ but it was not until 1930 that even a primitive nursing facility was opened. Actually a maternity facility, the limited hospital was privately operated by a local woman.⁹⁹

To correct this deficiency George Hoadley, the local member of legislature at the time, suggested that \$2.00 per month be collected from each employee to finance the construction of a suitable hospital. He also suggested that the oil companies erect the building, but said that an ambulance was out of the question as the ride to Calgary took too long. The editor of the local newspaper was supportive, writing that "Oil field work being one of the most hazardous known, you never know when you will need medical attention, and need it badly, also in an immediate rush."¹⁰⁰

In spite of the need for a hospital, the oilfield struggled through the 1930s with only company-sponsored first-aid teams¹⁰¹ and the limited facilities at the maternity hospital. The municipality refused to consider building a facility since the province was accruing great wealth from the area and should have been expected to build a hospital from those proceeds.¹⁰² Finally, in 1939 some decisions were made on a hospital. Although a proposal to use the Legion Hall as a hospital was forwarded,¹⁰³ a 60' x 40' former cookhouse was opened in July as a ten-bed hospital.¹⁰⁴ Bill Herron Sr. donated the building, but charged rent on the land and provided utilities for an

additional fee.¹⁰⁵ The small hospital could not serve all the oilfield needs and frequently sought funds from the local businesses and public. A hospitalization association was formed with an office in Black Diamond and monthly fees assured workers medical treatment in the facility.¹⁰⁶ During 1943 and 1944, hospital benefit dances raised money to add rooms to the always full hospital.¹⁰⁷ The oil companies occasionally made public relations coups by donating equipment to the cause.¹⁰⁸

Once the hospital was built an ambulance service was also established. Until 1945, the only oilfield ambulance services were provided by the funeral homes in High River and Okotoks.¹⁰⁹ This disturbing conflict of interest was later remedied when the Alberta Petroleum Association donated a used airforce ambulance in 1945.¹¹⁰ Thus, although the Turner Valley oilfield pumped millions of dollars into the local, national and international economy, oilfield residents benefitted only marginally from additional medical services during the booms, nor did they realize adequate hospital facilities or an ambulance system until well after the oilfield production peaked.

III. INSTITUTIONS AND SOCIAL LIFE

Numerous political, economic and social institutions played important roles in the social lives of the Turner Valley oilfield people. Each was seen as a link not only with the larger society, but also as tools to change the

oilfield development process. Regular attempts were made to use political representatives to force the provincial government to supply better social services. Businesses, although attracted to the oilfield by the prospect of economic rewards, also raised the standard of living. Other institutions contributed their influence to the oilfield social life. Educational institutions not only taught the fundamentals but further implanted British values. Entertainment varied between income groups and mirrored the activities found in Calgary and other parts of North America. Sports and leisure activities were highly organized for those who could afford to participate and less formal for the poor. Main line religions also added their moralistic tone to the community and social deviants and criminals encountered the forces of justice as personified in the provincial and federal police forces. Therefore, various institutions helped mould the oilfield social development process to resemble the culture of the larger North American society.

III. a. Politics

Politics also played an important part in determining the development of oilfield business and, therefore, social organization. Until 1935 the United Farmers of Alberta provincial government found the oilfield voters generally supportive. After the province gained control of its natural resources in 1930, an oilfield petition was

forwarded to the legislature which read:

Resolved that we the workers in the Oil Fields, generally known as Turner Valley, urge upon the Special Committee of the Legislature dealing with Redistribution in the province that consideration be given to the creation of an electoral district in our territory in order that this growing industry may have the opportunity of electing a member to represent the oil industry in this section of Alberta. The ever-increasing population in this district warrants such provision being made.¹¹¹

Evidently, the oilfield residents realized that their needs were going largely unnoticed. Consequently, when Social Credit groups were formed before the 1935 election, many people joined the new party and they expectantly awaited a new government. Although the Social Credit candidate received two votes for every vote polled for the previous UFA incumbent in the Okotoks-High River riding, the oilfield villages and polling stations gave five times as many votes to the Social Credit candidate as to other parties.¹¹²

Much to everyone's surprise, the new Premier, William Aberhart, chose the Okotoks-High River riding as his seat. The elected member graciously gave up his seat and Aberhart was elected in an uncontested by-election. While the High River newspaper gave enthusiastic support to the idea of the Premier representing the riding,¹¹³ any illusion that the premier's representation would give the riding a better standing in provincial affairs was quickly dissolved. Constituency complaints included petitions for a health officer and licensing of labour, a call for enforcement of

hours-of-work in order to create more jobs, restriction of imported labour, and demands for repairs to the much abused oilfield roads.¹¹⁴ When the Social Credit group insistently requested some action on the various epidemics, the Premier replied that he had already appointed a High River doctor to investigate and that "if he is not attending to his duty, surely I should not be blamed for that."¹¹⁵ The constituents badgered their representative constantly, but to little or no avail.

Consequently in 1937, people in the riding circulated a recall petition as had been provided for in the Social Credit platform. Clearly not pleased with the actions of their representative, they forwarded the two hundred dollar application fee with the appropriate forms to begin the recall process.¹¹⁶ The original recall petition from the Social Credit group claimed that in light of the major revenues accruing to the government from the oil and gas industry, this most important riding in the province was obviously being neglected and a more interested representative was necessary. The Premier responded in writing that "I think I know from what source the trouble is arising in my constituency..." Indeed, letters to the Premier from September to November, 1937 had listed "financiers," intimidation by oil company officials and the poor conditions of the oilfield roads among the petitioners' reasons for the recall. While intimidation may have been involved in acquiring signatures on the recall petitions,

the Premier and his party were clearly losing support in the riding. By 1939, all the members of the Turner Valley Social Credit group had let their memberships expire. No one in Royalties renewed and in Black Diamond only one-third of the previous supporters remained faithful until 1939.¹¹⁷

Although the Premier declared the recall invalid, he left the riding as quickly as he arrived, allowing another Social Credit candidate to campaign in the 1940 election. In Black Diamond, Hartell, Lineham and Longview the Independent candidate narrowly defeated the Social Crediter, while in Turner Valley and Royalties the Social Credit candidate won by a small margin. In the riding as a whole, however, the Independent candidate took four votes to every three received by the Social Credit candidate.¹¹⁸ By 1944 and the next provincial election, the oilfield was once again prospering under wartime conditions. A Social Credit member was returned to the legislature with a substantial majority in each oilfield polling station, if only by just a slight majority in the whole riding.¹¹⁹ Thus, throughout the oilfield development era the people of the valley communities regularly used the political system to vent their frustration on provincial government for its neglect of the region.

III. b. Commerce and Communication

Businesses added their own commercial flavour to the

Turner Valley oilfield culture. At first, shoppers travelled to Okotoks and Calgary for most of their store-bought goods. However, as the area developed, national and international companies also established branch stores in the valley.

The first bank, a branch of the Union Bank, opened in 1919 at Black Diamond. When spring breakup made the roads impassable the next year, the manager of the Okotoks office chartered an airplane and personally accompanied the payroll to Black Diamond. The Union Bank was then taken over by the Royal Bank of Canada in 1925.¹²⁰

Not far away at the intersection of the only main streets in Turner Valley, the Royal Bank established its first "oil and gas branch" in 1927. Not merely an extension of the Okotoks branch like its sister in Black Diamond, the new branch attracted substantial deposits. Totals in current and savings accounts during the development period were: 1930; \$971,000: 1935; \$719,000: 1940; \$1,113,000: 1945; \$2,109,000. Although the branch suffered economically during 1932 to 1934, throughout the development period it consistently equalled, or, as in the case of the years 1940 and 1945, generally exceeded the deposits on hand at both Royal Bank branches in Okotoks and High River.¹²¹ The Canadian Imperial Bank of Commerce also opened a branch during the boom of the late twenties, and on October 9, 1929 opened a branch in Black Diamond. Although this branch remained open only until March 21, 1934, it provided yet

another link between national financial institutions and the new oilfield.¹²²

Although a reliable communication link was important to the growing oilfield, by the early 1920s only a few companies were allowed country lines on the Okotoks telephone exchange. After the excitement of the discovery of gas in 1924 the demands for a reliable telephone service redoubled. The Highland Oil Company, with drilling operations in the oilfield and highly curious shareholders demanding daily information on their investment, contacted MLA George Hoadley in 1926 demanding better oilfield telephone service. In their letter they mentioned that "eight or ten" other wells "in close proximity to the Highland well" could benefit from closer contact with interested shareholders if only a telephone line could be arranged. Lines were made available later in 1926.¹²³

Among the first businesses subscribing to the service were the Canada Southern Oil Company, the Illinois-Alberta Oil & Refining Company and the Herron Cartage Company, all of Black Diamond. Both Home Oil and Imperial Oil retained their oilfield offices and telephones at Okotoks. The Royal Lumber Yard also received the services of a telephone beginning in 1926.¹²⁴ By 1928 telephones were installed at a machine shop, cafe and lumber yard in Turner Valley. As more oil companies moved into the valley, they used the telephones to contact their Calgary offices. A trucking firm appeared in the 1929 telephone directory along with a

bakery, the maternity hospital, a branch of the stock-brokerage firm of Solloway Mills, a drug store, a grocery and a men's wear store. Burns and Company Limited operated a meat market by the beginning of 1931. The Alberta Provincial Police appeared in the directory that same year along with various service and supply companies.

Telephone subscriptions in the late twenties appeared to indicate a growing level of interaction between the oilfield and various external communities. Originally, only branches of Calgary companies subscribed to the service to keep in touch with their oilfield operations. With increased development, national and international firms linked their newly created oilfield operations to their home offices. Eventually, even the local citizens subscribed to the service as their daily lives became more connected with people and businesses made accessible by local and long-distance telephone communication.

Then the first major boom in the oilfield ended in 1931. As if to illustrate the gravity of the downturn, a fire consumed most of the business section in Turner Valley early one Monday morning that April.¹²⁵ In the next half decade the number of telephone subscribers in the oilfield dwindled as demand for gas and oil support services also diminished. Renewed activity in the south end of the field after 1936 attracted more businesses back to the oilfield. Many of them settled in the more stable communities of Black Diamond and Turner Valley, but some of them moved into

Royalties and Longview, wanting to be nearer the new development. A few of the smaller businesses were locally owned but the larger concerns, which sold oilfield equipment and contracted out their services, were large national or international firms. The lumber yards fell into the former category while the Maaco Construction Company and the Newell and Chandler Drilling Contractors fell into the later, coming as it did from the United States to work in the Turner Valley oilfield.

III. c. Education

In common with the political and commercial aspects of culture, education in the oilfields also reflected the fluctuating fortunes of gas and oil development. Some rural schools served the public through the 1920s but by 1928 a severe demand was placed on the school district which included Black Diamond. An amalgamation of the schools in 1929 allowed for a greater tax base,¹²⁶ and new schools were built in the oilfield area around the two main communities. A Calgary contractor built four new rooms onto the Turner Valley school in 1930.¹²⁷ The next year, another school was built four miles southeast of Hartell to serve the growing demands of that area, with the result that disgruntled Hartell residents aired their grievances in the local newspaper. They were dismayed with the location of a school so far from their own settlement, and they disliked their relatively powerless position in the new school

district where they were heavily outnumbered by Black Diamond and Turner Valley residents.¹²⁸ In spite of all the new construction, classes were held in churches and any other makeshift classrooms which could be acquired in Black Diamond and Turner Valley in order to educate all the oilfield children.¹²⁹

After the boom in 1936, the school district could hardly grow fast enough to keep up with the rapidly expanding school-age population. In 1937, a local newspaper reported six schools serving 680 students. Grades 1 through 12 were taught as well as music, physical education, "manual training," science and "household economics." The school district was debt free and, therefore, the envy of many other districts.¹³⁰ By 1939 nine schools and 34 teachers served over 1100 students in the growing communities.¹³¹

All the schools were built to standards established by the provincial department of education. Nevertheless, a school inspection in 1939 found many defects. Fire escapes and extinguishers were deemed inadequate and many general heating practices were held to be unsafe. As in the homes in the oilfield, gas was used as the main source of heat. Many vent flues were dangerous and one school-heating system, although boasting the luxury of a gas regulator to protect against gas pressure fluctuations, had a continuous leak from its gas pipe. The inspector did all in his power to insure that gas was used in as safe a manner as possible, but felt sure that hazards relating to leaking gas would

continue to endanger the lives of the children. He identified the buildings as "fast burning" because of their totally wooden construction and said they would be consumed within minutes if a fire were to start. Therefore, he was somewhat reassured when told that the fire drills evacuated the structures in as little as forty seconds. With the exception of such gas and fire hazards, the inspector found the schools to be as well built as any in his district.¹³²

Educational institutions in the oilfield continued to experience growing pains. More than \$110,000 was spent by the school district in 1943 to employ twenty-seven teachers on staff and to supply and house some 1300 students. As a result of this remarkable growth, the Turner Valley area attracted special provincial government attention. It became one of the first centralized educational districts in Canada and its success encouraged the Alberta government to extend these large administrative units throughout the province. The curriculum was also affected by the oilfield's close ties to the larger society. Although American influence was strong in the oilfield social and business sectors, the principal of one of the oilfield high schools stated that no concessions were made to American influences in the classroom. Indeed, as the list of texts for the relevant years indicates, the history curriculum was largely concerned with ancient and modern European and British history, with only a minimal amount of Canadian content and no American history whatsoever. Consequently,

in the educational realm, oilfield culture was heavily influenced by Canada's Commonwealth ties.¹³³

III. d. Social organizations

Entertainment also played a pivotal role in the lives of the oilfield people. Each sex, age and income group had activities geared to its interests. In each instance, the entertainment was either imported or patterned after the leisure pursuits commonly found in the urban popular culture of the United States and Canada.

Oilfield children chose from numerous entertainment alternatives. The Black Diamond United Church provided a "Tuxis" club for boys of teenage years beginning in 1930.¹³⁴ Some oilfield children, whose parents could afford music lessons, won prizes in a music festival in Calgary in 1933.¹³⁵ A teen club provided a full slate of activities in 1939 including a topic entitled "Has any able bodied person the right to refuse the call of his country in time of war?"¹³⁶ Boy Scouts and Girl Guides groups also provided socialization opportunities for those children of families with at least moderate income.¹³⁷

Women's groups were numerous. At Hartell, the women formed a bridge club in 1930. In Black Diamond and Turner Valley the United Church women organized Ladies' Aid meetings and teas in the same year.¹³⁸ The Turner Valley Women's Institute was formed November 1, 1930. During its decades of continuous service the Institute raised money

through raffles and banquet catering. The proceeds went to support cancer research, general health research, cemetery upkeep and the construction and maintenance of a swimming pool.¹³⁹ A branch of the Institute was opened in Royalties in 1938, meeting in a refurbished oil company building.¹⁴⁰ A Gym Club provided fitness-training for women in the early 1940s,¹⁴¹ and the Black Diamond War Workers' monthly meeting served as a gathering time for the clothing which had been made to send to the men overseas.¹⁴²

The very existence of these women's organizations implies an active level of social organization, and they may provide a misleading impression of social cohesion. Although the records for these groups are not available, the activities pursued by the women suggest a standard of living higher than at least half of the oilfield population. Indeed, studies of other prairie communities show that although the women's organizations may have been numerous, the same names appeared on the rosters and executives of the various groups. Few of these activities would have included the wives and daughters of the unemployed and underemployed which made up as much as half of the population during the development period.¹⁴³

At first, oilfield men sought entertainment in Calgary.¹⁴⁴ Later, with little more than a pool room in the valley for amusement¹⁴⁵ some creative oilworkers organized an evening of entertainment. They changed their

name from "Oil Worker's Society" to the "Driller's Inspirational Angora Society." Highly irrelevant papers were given followed by some musical numbers. One tenor solo, entitled "Oh, for a Single Hour of Bliss" was somehow transformed into "Oh, for This Hour of Single Bliss."¹⁴⁶ Black Diamond men also organized an Elk's lodge,¹⁴⁷ formed a radio club¹⁴⁸ and by 1931 a branch of the Canadian Legion.¹⁴⁹ As with the women's organizations, the entertainment available to the men was either employment-related or depended on disposable income. Few of the hundreds of unemployed or poorer residents could afford the bus trip to Calgary for a movie or a dance, or even automobile transportation to the local theatre, dance or party at the other end of the oilfield.

Occasionally, community-wide celebrations included activities for all. After the great discovery at the Turner Valley Royalties well in 1936, the south end of the field burst into a celebratory mood with baseball games, dances and numerous parties. Perhaps the most spectacular event at this party occurred when dynamite, hung from a cable suspended between two rigs, was detonated after dark as a giant fireworks display.¹⁵⁰

Most activities, however, involved some expenditure. For example, musical concerts featuring Calgary bands,¹⁵¹ dancing lessons taught by a Vancouver traveller,¹⁵² and a variety of American movies at the theatres in Black Diamond, Turner Valley and Royalties were available in the

oilfield.¹⁵³ Therefore, international entertainment and local branches of national organizations provided social enjoyment and North American popular culture to those levels of the oilfield population which could afford it.

III. e. Sports and leisure

The level of popular participation in sports also correlates strongly to cultural values held by the society at large. Participation in and spectatorship of sports activities also implies a significant amount of leisure time, and often, expendable income. Highly competitive, organized sports indicate a high degree of industrialization, an intense desire to succeed and, particularly in individualized sports, a strong work ethic. Lower classes often find games of chance more interesting and as income increases so does the importance of highly structured, skilful pursuits. The strong identification of a community with a single sport can also indicate a high level of social cohesion and integration.¹⁵⁴

At least three levels of activity can be identified in oilfield sports culture. First were the largely unorganized, individual efforts open to any fisherman or hunter interested in the out of doors. Next, those with a bent for organized recreation and the means to participate, joined in the local branches of the national or international sports organizations. Finally, only the very talented participated in the company-sponsored team sports.

For example, in the case of hockey, local residents were considered unqualified and semi-professional players were imported and offered employment by the oil companies which sponsored the teams.

Oilfield sports ranged from individual activities to semi-professional pursuits. Curling was first organized in 1926.¹⁵⁵ Boxing bouts of two minutes each were staged at a Legion smoker in Turner Valley in 1930.¹⁵⁶ During the summer a baseball diamond was built and teams with uniforms competed at Sport's Day on July 1.¹⁵⁷ During 1931 a Polo and Hunt Club and Fish and Game Club were formed. Later that fall, the Turner Valley high school rugby team suffered a miserable 13 to 5 loss at the hands of its High River rival.¹⁵⁸

During 1937 the various sports activities were revived after falling on hard times in the early 1930s.¹⁵⁹ Curling was renewed and the Turner Valley branch of the Alberta Fish and Game Association, in an unusual act of defiance, attacked the proposal by one oil company to drill in the middle of a small lake. The sportsmen feared that oil on the water would harm the birds and were supported by the Ducks Unlimited association in their drive to keep the lake clean for their moving targets.¹⁶⁰

Golfing added an interesting dimension to the social development of this oilfield. By 1930 a Golf and Country Club was in full operation. Referred to initially as the Turner Valley Golf Club and later as the Royalite Golf and

Country Club, it was a member of the Alberta Golf Association and boasted nearly fifty members, each paying a \$50.00 membership fee. Most of the first members of this club lived in the Royalite Hill area. Sam Coultis was both plant manager and the president of the Turner Valley Golf and Country Club in the early years. According to one account the members laid on "delicious meals" for themselves on the golf course grounds.¹⁶¹ Further south in the oilfield there were two facilities, one a community-built golf course at Mill City and another at Longview which was used by ninety residents.¹⁶² These golf courses were apparently more accessible to the regular oilfield workers than the exclusive Royalite Golf and Country Club.

Finally, semi-professional hockey was supported by oilfield companies throughout both booms. The first team, called the Imperials, played in the Southern Alberta Senior Amateur Hockey League from 1929 through 1931.¹⁶³ The Oilers represented the oilfield from 1938 through 1941 as companies once again sponsored hockey players from around western Canada.¹⁶⁴

This great variety of sporting pursuits generally fits into the model of a highly competitive, technologically advanced urban cultural centre. However, the historical record is mute on the activities of the poorer workers in the oilfield. Many of the participatory activities excluded the lower class by virtue of the equipment required or the membership fee in the appropriate club or team. Spectator

sports theoretically would have been accessible to a larger portion of the population but the famous Turner Valley Imperial and Oiler hockey teams used the Okotoks arena as their home rink, thereby denying many workers and their families the opportunity to attend a free sporting activity in the oilfield. As a result, the oilfield workers participated in activities requiring little capital expense such as fishing, informal team sports, card games and other entertaining games of chance. Sporting activities thus directly reflected the many levels of social and economic fortune experienced by the people attracted to the Turner Valley oilfield.

III. f. Religion

Organized, nationally recognized, religious groups also added an important dimension to oilfield culture. First, branches of traditional, mainline churches obviously indicate close ties to the larger religious community since the immigrants imported their religious beliefs with them. In addition to the rapid formation of local congregations of these larger denominational organizations, the nearly total lack of cults or sects points to an even higher level of social development and cultural integration. It has been observed that frontier communities spawn unorthodox religious movements in direct response to feeling marginalized or forgotten by the religious denominations.¹⁶⁵ The oilfield thus falls into the

category of communities which are very closely tied to metropolitan centres, intimately known by the parent congregations and consequently, firmly ensconced in the traditions, budgets and programs of the national and international church body.

Oilfield workers' religious affiliations were strong and they usually worshipped at various traditional churches. Throughout the 1920s Catholic mass was held in homes and in local schools.¹⁶⁶ By 1930 United Church, Church of Christ, Undenominational, Catholic, Pentecostal and Anglican congregations gathered in the booming villages of Turner Valley and Black Diamond.¹⁶⁷ At first, these services were held in local halls or schools but eventually most of the groups built their own places of worship. These churches sponsored choirs, women's organizations and children's clubs, and catered banquets in order to raise funds for their favorite charities.

Later in the 1930s, religious denominations in the area received a further boost with the renewed influx of people. At the same time, those willing to attend meetings were called to hear the occasional itinerant preacher as he passed through the area.¹⁶⁸ By 1939 the Anglican, United and Church of Christ groups were busy again,¹⁶⁹ and were soon joined by adherents of the Church of the Nazarene and the Latter Day Saints in the war years.¹⁷⁰ Throughout the development period, longtime oilfield residents and newcomers alike worshipped together in various churches.

III. g. Crime

Regarding social deviance and criminality, it appears that the region experienced increased demand for police protection and law enforcement during the 1920s, 1930s and the 1940s. Heinous crimes were uncommon but regular reports of convictions for liquor, automobile, and minor break-and-enter violations appear in the local newspapers. Statistical information on oilfield crime is not readily available since police reports for the period in question either do not exist or are not available to the public. Prostitutes apparently plied their trade in the oilfield from the 1920s through the 1940s, often following the bankers as they made their rounds on payday to the various worksites. Gambling also wiled away the hours and dissipated the money of the sometimes busy and rich, and the sometimes unemployed and poor, oilfield workers. Bootlegging was a pastime for some although others apparently made a living off liquor profits.¹⁷¹

A study of criminal activity in nearby Calgary indicates that although the depression caused hardship, the rate of crime did not increase as might have been expected.¹⁷² Turner Valley also experienced less crime during the early 1930s but perhaps for a different set of reasons. Oilfield police activity generally indicated a relationship between development booms and crime. Until 1929, the Alberta Provincial Police patrolled the area from

Okotoks, and from 1930 to 1933 the provincial police maintained a detachment in Turner Valley, manned by two officers. For the period from 1933 to 1937 the oilfield was without a local police force and after 1937 the Royal Canadian Mounted Police administered local justice.

By comparison to the more stable Calgary community, the Turner Valley oilfield attracted a large influx of skilled and unskilled workers in great numbers in the late 1920s and again after 1936. During each period the police were required to enforce the laws against the gambling and drunkenness which was not uncommon in the booming oilfield. Police duties also included investigations into the numerous accidents and general surveillance of parties and other potentially volatile gatherings. Throughout the development period, however, a maximum of two police officers retained control of the oilfield thereby indicating that although crime increased as would be expected with the influx of large numbers of oilfield people, the criminal activity did not demand the services of a larger police force.

Conclusion

At first glance, this review of the social development in the Turner Valley oilfield may appear to be rather typical of resource boom towns. On closer examination, however, this oilfield proves to be significantly different from other resource settlements. Although scholarly discussion continues on the nature of resource towns, David

Bercuson has described the western Canadian resource communities in the following way. In his view, their isolation provided few creature comforts, few social institutions which served the people, their closed society left little room for casual or unskilled labour, and occupations were consequently static with little room for improvement. These social conditions often encouraged polarization of the working classes and accounted for the rise of labour unions and radicalism in western resource towns.¹⁷³

With few exceptions, the Turner Valley oilfield does not fit this frontier community pattern of the mining town. It more closely resembles a resource community intimately connected with national and international structures rather than a local and polarized mining frontier. It was not isolated, and instead it relied on nearby Calgary for many of its essential facilities. Turner Valley was not a single-company town but it also was never free from the influence of the major employers. Transient workers from other oil producing areas in Canada and the United States migrated to and from the oilfield bringing economic and social ideas with them which eventually transformed the local culture.

Although the oilfield was not characterized by the typical frontier social forces, factors more common in isolated resource communities after World War II dictated the resource development process in Turner Valley. These

included close ties to the international market and capital forces and a heavy reliance on technical expertise and sophisticated oilfield equipment which was only available from the United States. Also, the highly transient labour force added to the social instability in the oilfield. As a result, social life in the Turner Valley oilfield was radically different from life in other resource extractive communities in Western Canada.

FOOTNOTES - CHAPTER THREE

¹ For more discussion of this topic see "Canadian Resource Towns in Historical Perspective" Gilbert A. Stelter and Alan F.J. Artibise in Plan Canada 18(1977): pp. 6-14 and "Towards an Alternative Theory on Resource-Based Town Development in Canada" by John H. Bradbury, Economic Geography 55(1979):pp. 147-166.

² Highway Traffic Board Reports, Province of Alberta (Edmonton, Alberta: King's Printer), 1930-1 to 1944-5 inclusive. CA2AL/PW/A56Y

³ Light of the Flares (Turner Valley, Alberta: Sheep River Historical Society, 1979), p. 78.

⁴ High River Times, (High River, Alberta), August 15, 1929.

⁵ Ibid., August 8 and 15, 1929.

⁶ Ibid., September 12, October 3 and 10, 1929.

⁷ Ibid., August 1, 1929.

⁸ Ibid., August 8, 1929.

⁹ Ibid., October 17, 1929.

¹⁰ Ibid., October 24, 1929.

¹¹ Ibid., October 31, 1929.

¹² Ibid., December 5, 1929.

¹³ Turner Valley Observer (Turner Valley, Alberta), January 17, 1930.

¹⁴ Ibid., March 21, 1930 and February 21, 1930.

¹⁵ Ibid., April 10, 1931.

¹⁶ Ibid., April 10, 1931.

112. 17 Flare, July 16, 1937 and Light of the Flares p. 112.
- 18 Light of the Flares, p. 112.
- 19 Flare, September 15, 1944.
- 20 Light of the Flares, p. 63.
- 21 Flare, May 6, 1937.
- 22 Ibid., September 3, 1937.
- 23 Ibid., July 16, 1937.
- 24 Ibid., October 22, 1937.
- 25 Ibid., September 3, 1937.
- 26 Ibid., April 7, 1939.
- 27 Ibid., April 19, 1940.
- 28 For further analysis of squatters' sites see W.L. Morton, "The Significance of Site in the Settlement of the American and Canadian Wests" Agricultural History, Vol. XXV (July, 1951), pp. 97-104.
- 29 Light of the Flares, p. 109.
- 30 Ibid., p. 56.
- 31 Ibid., pp. 144-146.
- 32 Times, August 8, 1929.
- 33 Observer, March 7, 1930.
- 34 G.S. Hume, Oil and Gas In Western Canada (Ottawa: Geological Survey, Department of Mines, Canada, 1933), pp. 337-8, Light of the Flares, p. 127.
- 35 Observer, March 7, 1930.

- 36 Times, June 21, 1934.
- 37 Light of the Flares, p. 126.
- 38 Hume, p. 338, Light of the Flares., p. 514.
- 39 Observer, April 11, 1930.
- 40 Hume, p. 341, Light of the Flares, pp. 430 & 641.
- 41 Times, December 5, 1938.
- 42 Light of the Flares, p. 48.
- 43 Ibid., pp. 315-316.
- 44 Ibid., p. 129.
- 45 Ibid., p. 356.
- 46 Ibid., p. 531.
- 47 Ibid., p. 321, Calgary Herald, March 16, 1960.
- 48 Ibid., p. 448.
- 49 Ibid., pp. 326, 392.
- 50 Ibid., p. 442.
- 51 Calgary City Clerk's papers, Glenbow Alberta Archives, Acc Accn. No. BE.33/.C151P/f. 1458 - 1929.
- 52 Western Oil Examiner (Calgary, Alberta) May 8, 1926.
- 53 Observer, February 14, 1930.
- 54 Light of the Flares, p. 448.
- 55 Flare, May 19, 1939.

56 Provincial Archives of Alberta, 78.133 / 1092c, from Percy Wray, Secretary Treasurer for the Village of Black Diamond to the Deputy Minister, Department of Municipal Affairs, September 4, 1942.

57 Times, April 28, 1938.

58 Light of the Flares, p. 129.

59 PAA / 78.133 / 993b, Recommendation make by Horace L. Seymour, Director of Town Planning, December 19, 1929 and subsequent report in 1930.

60 PAA / 67.4 / 426, October 19, 1941.

61 Light of the Flares, p. 691.

62 Flare, February 23, 1940.

63 PAA, Premier's Papers, 693B, Highwood-Sarcee Oils Limited & Associates, June 29, 1940.

64 Ibid., Ed Sinclair of Longview to Premier, July 17, 1940.

65 Ibid., R.W. Scott of Longview to Premier, July 11, 1940. C. McCreasey of Royalties to Premier, September 30, 1940.

66 Ibid., Premier to Deputy Attorney General G.H. Henwood, December 13, 1937. W.A. Fallow, Minister of Public Works to Premier, December 7, 1937.

67 Times, May 26, 1939.

68 PAA / 78.133 / 993B.

69 Town of Turner Valley village council minutes, December 8, 1931. (Hereinafter referred to as Turner Valley Minutes)

70 Observer, January 30, 1930.

- 71 Ibid., April 17, 1931.
- 72 Light of the Flares, p. 312.
- 73 Ibid., p. 517.
- 74 Turner Valley Minutes, March 31, 1930.
- 75 Observer, June 12, 1930.
- 76 Turner Valley Minutes, April 16, 1930.
- 77 Ibid., May 6, 1930, June 2, 1931.
- 78 Flare, April 21, 1939.
- 79 Ibid., April 28, 1939, September 1, 1939.
- 80 Western Oil Examiner, February 25, 1928, p. 4.
- 81 Light of the Flares, p. 562.
- 82 Times, October 3, 1929.
- 83 Ibid., September 12, 1929.
- 84 Observer, November 8, 1929.
- 85 Ibid., November 8, 1929.
- 86 Ibid., March 14, 1930.
- 87 Ibid., December 5, 1930.
- 88 PAA / 78.133 / 993A, September 11, 1931 through January 2, 1934, including correspondence from H. Barker, Village of Turner Valley, Dr. Kenny of Turner Valley, and Acting Deputy Minister of Department of Municipal Affairs (no name given or signature on carbon copies), all to R. English, Minister of Municipal Affairs.
- 89 Turner Valley Minutes, August 13, 1934, October 1, 1934.

- 90 PAA / Premier's/1050A, December 2, 1936.
- 91 Flare, July 16, 1937.
- 92 Turner Valley Minutes, 1943.
- 93 Light of the Flares, p. 322. Her condition was probably caused by the large amount of hydrogen sulphide in the air.
- 94 Ibid., p. 290, Times, September 9, 1937, February 21, 1941, August 29, 1941, April 16, 1943, February 5, 1943, September 22, 1944, February 9, 1945. Also Emily McKay, RCT 623, Petroleum Industry Oral History Project, Glenbow Archives (hereafter referred to as PIOHP).
- 95 Observer, September 18, 1931. For more information on the formation of health units in Alberta and specific reference to the Okotoks-High River Unit see Adelaide Shartner, Health Units of Alberta (Edmonton, Alberta: Health Unit Association of Alberta, 1982), pp. 62-66.
- 96 Ibid., July 10, 1931.
- 97 Flare, February 24, 1939, March 29, 1940, March 6, 1941, February 27, 1942, October 15, 1943.
- 98 Observer, December 6, 1929.
- 99 Light of the Flares, p. 171.
- 100 Observer, January 24, 1930.
- 101 Flare, October 22, 1937.
- 102 Ibid., October 15, 1937.
- 103 Ibid., April 14, 1939.
- 104 Ibid., July 14, 1939.

- 105 Light of the Flares, p. 172.
- 106 Flare, November 6, 1942.
- 107 Ibid., February 12, 1943, February 25, 1944.
- 108 Ibid., April 28, 1944.
- 109 Observer, January 17, 1930.
- 110 Flare, May 25, 1945.
- 111 Observer, January 24, 1930.
- 112 PAA / 71.138 / f19.
- 113 Times, October 10, 1935.
- 114 PAA / Premier's / 1050A, December 2, 1936.
- 115 Ibid., October 27, 1936 Premier to A.L. Clemens
of High River.
- 116 Flare, September 23, 1937 and October 7, 1937.
- 117 For correspondence regarding the recall and the
Premier's responses to the action see the following files.
PAA / Premier's/ 1050A, April 8, 1937 and April 15, 1937 /
815 September 24, 1937 / 1050B September 25, 1937 and
October 20, 1937 / 1111, November 2, 1937 / 1050B November
6, 1937 and November 7, 1937 / 1110, November 14, 1937 /
1050B, January 31, 1939.
- 118 PAA / 71.138 / f 26, aa-av.
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CONCLUSION

If remote geographic isolation, single company paternalistic control and quick formation followed by equally quick dissolution typify the development pattern of the classical resource community, the Turner Valley oilfield in southwestern Alberta does not fit the classic pattern. Indeed, this oilfield was affected by a complex set of exogenous forces at almost every level of its economic, political and social development. As various institutional powers sought to control the development process in the Turner Valley oilfield their cumulative forces left no aspect of oilfield culture untouched.

While most natural resources occur in geographic locations far removed from metropolitan centres, a geological quirk placed the Turner Valley oilfield a scant thirty miles from Calgary. Had this unique formation been located in the far north or in territorial waters as have other larger Canadian oilfields, the economics of its development would have proved prohibitive. But in the second decade of this century this oilfield was not only accessible but also of great economic, political and strategic military interest to the two great powers of the western world. British and American interest, through their respective oil companies and portfolio and direct investment preferences, vied for control over the Turner Valley oilfield as soon as its significance was revealed. Within a

few short years an arm of one American integrated oil company controlled the production, refining and distribution process in this oilfield. Other less powerful political bodies also clamoured for a say in the development of this oilfield. Until 1930, the government at Ottawa held tenuously to its control over natural resources in the prairie provinces, including the Turner Valley oilfield. During these early years it directed the oilfield development process through its land regulatory system and the Geological Survey of Canada. After struggling to gain power over the oilfield, the provincial government found its duties and responsibilities to be onerous. The financial benefits which came from the royalties also demanded a heavy political price. Local governments also attempted to benefit from the development process but, closely linked as they were to the vagaries of the boom and bust cycles, they were usually only able to attempt to meet the immediate social needs of their constituents. As a consequence of this periodic development cycle a unique demographic situation arose. Immigrants flocked to the oilfield in almost equal numbers from other parts of Canada, from Great Britain and the United States. This unique immigration pattern accurately mirrored the diversity of the forces which attempted to affect oilfield culture.

The oilfield workplace was affected at every level by its proximity to Calgary and the consequent close tie to numerous other metropolitan centres. Ironically, this close

tie did not cause a reliable all-weather road to be built and proposed railways were not viable as the main export from the area was more efficiently transported through a pipeline than in tankers on trucks or railway cars. Imported technology was used to drill wells and bring the petroleum products to production but it often required adaptation or complete reworking to fit the demands of this unique oilfield. Refining and distribution was dominated by one American-controlled company and, along with the independents who worked the oilfield, the major employer established working conditions in direct violation of provincial labour laws and eventually forced Edmonton to change its regulations to match these conditions. American labour continued to deprive Canadians of work in this oilfield long after all positions could be filled with well-trained Canadians. Also, although a few labour organizations and labour unions gained momentary status in the oilfield, they were broken by the major employer and eventually replaced by in-house organizations. And finally, hazardous labour conditions were created by the desire to increase profits and any government safety regulations were either ignored or appealed by the oilfield employers.

The proximity of metropolitan influence not only dictated many aspects of the oilfield workplace, it also moulded almost every detail of social and economic culture. The poor transportation linkage with Calgary stranded the oilfield residents many times each year. Settlements were

built in direct response to the current area of exploration and consequently housing, heating, sanitation and health facilities varied greatly depending on the boom and bust cycle and the position of the oilfield resident in the hierarchy of the local society. Politically, the residents were outspoken but the overriding powers of the numerous external political forces overwhelmed any local demands. Business, the educational system, entertainment and sports, as well as religion and crime all seem to have developed with an eye to the larger world and in response to the same cyclical development process which directed almost all other aspects of oilfield economy and culture.

Perhaps the Turner Valley development process typified a new resource community pattern. Gone was the remote, single-employer, company town which was created and abandoned by a single industry. This new resource town was too close geographically to a metropolitan centre to be isolated from the larger urban culture or protected from the influence of external political and financial networks. At work and at home the resident of this resource community was continuously in contact with the economic, political and social forces which affected the remainder of the larger society.

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Appendix A
Deaths and or serious injuries 1915 to 1950

Date	Incident	Source
11/8/15	Well on fire, three men badly burned tinsmith fell from rig the previous day and broke both ankles	<u>Albertan</u> 11/9/15
6/2/16	Man badly injured on a rig and taken to hospital in Calgary	<u>Herald</u> 6/3/16
12/23/26	Explosion blows a separator into hundreds of bits, men bruised and injured, no one killed	High River <u>Times</u> 12/30/26
11/23/27	Explosion at well injures five men two children - children burned to bad as not expected to live	HR Times 11/24/27
12/19/28	Derrick burns sending man to Calgary hospital with severe burns to hands and face	<u>Herald</u> 12/20/28
2/22/29	Man killed and another injured in two separate explosions	Premiers Papers 489
3/31/29	Two men killed when drilling rods hurled into air and came down crushing them after rigs blows in	<u>Herald</u> 4/1/29
5/3/29	Oil man crushed to death while loading lumber for transport from Okotoks to the oilfield	<u>Herald</u> 4/3/29
8/21/29	Man sustained injuries which caused death after being struck on head by tools while working on a rotary rig. Another employee also injured	HR Times 8/29/29
10/4/29	Employee on rig breaks arm and is - to hospital in Calgary	<u>Albertan</u> 10/5/29
11/8/29	Rock chips inbedded in man's face as a result of explosion at well	<u>Albertan</u> 11/9/29
11/19/29	Driller breaks a leg on duty at a well Sent to Calgary for set of compound fracture	<u>Albertan</u> 11/20/29
12/7/29	Three men badly burned in a fire which consumed the enginehouse and partly damaged the derrick	<u>Herald</u> 12/7/29
1/6/30	Drilling contractor killed by explosion while attempting to thaw out a frozen water tank at a worksite	<u>Albertan</u> 1/7/30
1/9/30	Five men badly burned by an explosion at a rig. All five admitted to hospital in Calgary	<u>Albertan</u> 1/10/30
3/21/30	Separator explodes and kills man working on it. He was apparently trapped by the leg	TV <u>Observer</u> 3/21/30
4/27/30	Man suffers a broken leg as a result of activity when well blows in	<u>Observer</u> 5/2/30
5/2/30	Man badly injured while working on a	<u>Observer</u>

	separator. Valve broke and fractured jaw in two places	5/2/30
5/2/30	Man has three fingers amputated as a result of rig injury	<u>Observer</u> 5/2/30
10/24/30	Rig blows up seriously injuring two men	<u>Observer</u> 10/24/30
3/13/32	Explosion at a rig send a seriously injured workman to hospital	<u>HR Times</u> 3/17/32
10/29/33	Four people killed and two seriously injured when truck covered with 30 foot lengths of 14-inch pipe collides with passenger bus. The pipe from the truck speared into the bus	<u>HR Times</u> 11/2/33
1933	Royalite company reports 20 "disabling accidents" in its annual report	<u>Annual Report</u> 1934
1934	Royalite company reports 8 "disabling injuries" in its annual report	<u>Annual Report</u> 1934
11/8/34	Man killed while working on rig. Steam pipe swung and fractured skull	<u>Observer</u> 11/10/34
1936	Man loses eye when spike flies up into it while working on a rig. Total of accidents 37. Lost time accidents 14	Royalite GA# 6891
5/2/37	Man crushed to death by chain on a rotary rig.	<u>Herald</u> 5/3/37
8/6/37	Man badly injures finger on rig and forced to take several days off work	<u>TV Flare</u> 8/6/37
8/13/37	Man badly injured on a rig in oilfield and taken to hospital in High River	<u>Flare</u> 8/13/37
9/4/37	Man killed when a timber fell off a rig and fractured his skull	<u>HR Times</u> 9/9/37
9/24/37	Young man receives severe cuts to face when valve explodes	<u>Albertan</u> 9/25/37
4/39	Preacher killed when improperly loaded casing slides off truck and penetrated his car	<u>Herald</u> 10/13/39
2/26/38	Three men killed and one injured as a result of an explosion at a refinery	<u>Albertan</u> 2/28/38 <u>HR Times</u> 3/3/38
2/24/39	Man falls from derrick and suffers serious internal injuries. Taken to Calgary hospital for operation	<u>Flare</u> 2/24/39
8/19/39	Oilworker dies as a result of injuries sustained while working on a rig	<u>Flare</u> 8/25/39
11/10/39	Two oilfield workers lose digits as a result of accidents. One lost a thumb and the other lost two fingers	<u>Flare</u> 11/10/39
12/9/41	Two men killed and four seriously injured by being overcome by gas	<u>Flare</u> 10/12/41
5/1/42	Man falls 85 feet from rig and suffers double fracture in one leg and internal	<u>Flare</u> 5/1/42

	injuries	
7/1/42	Man suffers double fracture of leg when revolving table and pipe crushed his leg	<u>Herald</u> 7/2/42
10/9/42	Man suffered a badly injured head, a broken collarbone and an injured hip when thrown across rig floor after contact with moving equipment	<u>Flare</u> 10/9/42
1943	<u>Royalite Annual Report</u> for 1943 recorded:	<u>Annual Report</u> 1943
	Total temporary disability 64	
	Permanent partial disability 2	
	Death 2	
3/22/43	Man loses both legs below the knee as a result of an accident in which a pipe under high pressure snapped and severed his legs	<u>Flare</u> 3/26/43
7/16/43	Man suffers broken arm and head and torso injuries when casing crushes him	<u>Flare</u> 7/16/43
8/7/43	Four year old boy drowns in abandoned cellar of well. Water with gas bubbling up through it was responsible for the drowning. Company found to be negligent in protecting site	<u>Flare</u> 7/16/43
8/21/43	Man killed by spinning rope on rig while casing was being run	<u>Flare</u> 8/27/43
10/26/43	Man, overcome with gas fumes, falls from top of tank he was gauging and later dies in hospital	<u>Flare</u> 10/29/43
10/29/43	Man admitted to hospital with injured left foot	10/29/43
12/16/43	One man killed as a result of gas fumes and another as a result of rig accident	<u>Flare</u> 12/24/43
2/7/45	Man killed as a result of a gas leak on a pipeline project	<u>Flare</u> 2/9/45
7/28/45	Two men killed when rig collapses	<u>Western Oil Examiner</u> 7/28/45
3/8/50	Man killed while unloading rig	<u>WOE</u> 3/8/50

Appendix B

Serious or deadly accidents related to gas in Turner Valley

Year	Incident	Source
1927	-Explosion at well ignites local houses	High River <u>Times</u> 11-24-27
1929	-House fire caused by unregulated gas	Turner Valley <u>Observer</u> 12-6-29
1930	-House explodes and throws woman into front yard covered with bad burns	<u>Observer</u> 1-17-30
	-House burns down when overheated gas stove explodes	<u>Observer</u> 3-7-30
	-Shack explodes at night causing fatal burns to a man sleeping inside	<u>Observer</u> 4-18-30
	-Hartell fire consumes house, garage and automobile	<u>Observer</u> 10-3-30, 12-5-30
1931	-Man severely burned in a house fire	<u>Observer</u> 6-19-31
	-Business section of Turner Valley burns to the ground	<u>Observer</u> 4-24-31
1937	-Longview pool hall explosion sends two men and a boy to High River hospital	Turner Valley <u>Flare</u> 12-9-37
	-Barber shop explosion in Royalties sends barber to High River hospital	Premier's Papers 693A
	-Shack explodes in Royalties, deposits sleeping children outside	Premier's Papers 693A
1938	-Four people killed in explosions in one week	<u>Times</u> 3-3-38
1940	-Young boy dies after becoming overcome by gas fumes leaking from nearby pipe	<u>Flare</u> 3-1-40
1941	-Two explosions in two weeks kill one woman and injure three men	<u>Flare</u> 10-24-41
	-Three men killed in a shack fire	<u>Times</u> 10-30-41
1943	-Fire sweeps through Hartell started by gas flare at nearby rig	<u>Flares</u> p. 114