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A Brief History
OF THE DEVELOPMENT
OF
Irrigation
IN THE
LETHBRIDGE DISTRICT.

BY
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History of Irrigation in the Lethbridge District.

References and Authorities.

- (a) Report to the Government on Irrigation and Canadian Irrigation Surveys--- 1894--By, J.S.Dennis.
- (b) William Pearce--Letter to S.G.Porter, March 6th,1924.
- (c) Official Files, Department of the Interior, Irrigation Office, Calgary--J.S.Tempest, Commissioner of Irrigation.
- (d) Files and records in A.R.&I. Office, (see also appendices A.& B.)
- (e) " 56 Victoria, Chap.69", See Appendix "C".
- (f) Report of Wm.Pearce, D.L.S., Supt. of Mines to the Commissioner of Dominion Lands, dated at Calgary, October 31st,1894.
- (g) Life and Times of Sir Alexander Tilloch Galt, by Oscar Douglas Skelton--Chap.18. (In Lethbridge Public Library).

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A BRIEF HISTORY OF THE DEVELOPMENT OF
IRRIGATION IN THE LETHBRIDGE DISTRICT.

Prepared for the Lethbridge Historical
Society, by Charles Raley and Sam G. Porter.

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First Ditch in Alberta.

The year 1925 marks the 46th anniversary of the practice of irrigation in Alberta. The earliest use of water for irrigation in Alberta of which we have any record was by Mr. John Glen, who in 1879 built a small ditch out of Fish Creek, eight miles south of the present City of Calgary, and irrigated fifteen acres in Section 3, Tp. 23, Range 1, West of the 5th, M., with "satisfactory results" (a). Prior to this a ditch had been started from Beaver Creek and carried down the flat on the north bank of the Oldman River in what is now the Peigan Indian Reserve. This ditch was started by two Americans who came in with a band of horses and settled there, but before they had completed it the land they intended to irrigate was set apart as an Indian Reserve; so they abandoned their enterprize and returned south. As the treaty under which the Peigan Indian Reserve was set apart was concluded on the 22nd, day of September, 1877, it must have been in that year that the ditch was built (b).

Irrigation Act Adopted.

These are believed to be the earliest attempts at irrigation in Alberta. During the next fifteen years there was more or less activity, chiefly among ranchers in the construction of small irrigation works, mainly for the irrigation of hay meadows, and interest in irrigation developed to the point that in 1893 an Act was introduced in the Dominion Parliament dealing with the matter. The Act was not passed at that Session but J.S.Dennis, Chief Inspector of Surveys, was commissioned to visit the Western United States for the purpose of studying and reporting on the irrigation laws and practice in that Country. His report was submitted to Parliament at its next session, and upon the recommendations contained in it, was founded the Northwest Irrigation Act passed by Parliament the 23rd, day of July, 1894. This Act has been the legal basis of all subsequent irrigation legislation and development in Canada.

Credit to William Pearce.

In speaking of the developments which led up to this result, Mr.Dennis in his report to the Government on Irrigation in 1894, said "The existing climatic conditions, and the necessity for irrigation, had been frequently referred to in the reports of Dominion Land Surveyors employed in surveying this arid region into townships and sections,

but it is probably due to the lengthy reports upon this subject, and to the persistent advocacy of the principle by Mr. Wm. Pearce, Supt. of Mines, more than to any other cause, that the public have at last recognized the necessity for irrigation and the benefits to be secured therefrom." (a).

This was more than thirty years ago, and Mr. Pearce is still preaching the same gospel. Truly this record entitles him to the distinction of being called the "Father of Irrigation in Alberta."

Irrigation Surveys inaugurated by the
Government.

The year 1894 therefore may be taken as marking the beginning of any definite government policy in the matter of irrigation. In that year the northwest Irrigation Act became law, and the Dominion Government began its general irrigation surveys under the direction of J.S. Dennis. In his report for that year he presents a list of ninety-three canals in operation, under construction, or projected in that portion of Alberta and Assiniboia known at that time as the "Arid Region". (a) These were all for small areas with the exception of the Calgary Irrigation Company; The Alberta Irrigation Company, and the Spring Bank Irrigation Company; and only the first one of these three had at that time started construction. Sixty-three projects are shown at that date, 1894, as being constructed and in operation, ranging in area irrigated from seven acres to twenty-five hundred acres.

Earliest Irrigation in the Leth-
bridge District.

Having thus given a general outline of the beginnings of irrigation in Western Canada, we will from this point on, confine ourselves to a more or less detailed statement of the events associated with the development of irrigation in what is termed the Lethbridge District in Southern Alberta, which is here understood to include that portion of the Province from the International Boundary on the south to a line approximately twenty miles north of Lethbridge on the north, and from a line through Waterton and Pincher Creek on the west to a line through Burdett and Pakowki Lake on the east. This district comprises an area fifty miles in extent north and south, with a mean width east and west of about one hundred miles, or a total area of approximately 5,000 square miles, or 3,000,000 acres

First Ditch was on Cocharne
Ranch, near Cardston.

The first ditch in this district was built from the Belly River by a squatter named M.S. Brown in 1882, to irrigate portions of sections five and six, Tp. 5, Range 26, West 4th M. After operating his ditch for two seasons he sold out his improvements to the Cochrane Ranch Company. Apparently during the next twelve years the ditch was not used. A survey was made in September, 1894, by P. Turner Bone, who stated that his survey embraced a system of ditches which he found already existing on the ground.

W.F.Cochrane, Manager of the Company, made official application for a water right under the terms of the Irrigation Act, April 10th, 1895, less than nine months after its enactment. The works were reported by J.S.Dennis, then Chief Inspector of Surveys, on the 31st, December, 1895, as being in condition for license and a license was finally issued in July, 1899, in favor of the Cochrane Ranch Company (c).

This land was afterwards purchased by E.J.Wood, now President of the Alberta Stake of Zion, Cardston, who used the ditches several seasons.

In 1910 the system was reported as being in a state of dis-repair and the license was finally cancelled in August, 1912. The area under this old ditch is now included in the United Irrigation District, constructed in 1923.

At the time this ditch was built by M.S.Brown the only other white settler in that vicinity was John Smith, who lived on Section fifteen about three miles down the river. (c).

The Coming of the Mormons.

The next event of significance bearing on the history of irrigation development in this district was the coming of the Mormon settlers. They had been pioneers in irrigation in Utah and it was only natural that they should interest themselves in similar development here. They first came to the Cardston district in 1837. In 1839 Charles Ora Card, the founder of the Mormon settlement at Cardston,

and for whom the town was named, built a ditch out of Lees Creek to water about 800 acres of bottom lands just across the creek from the town of Cardston. It was partly destroyed by floods, apparently about 1905, and as Mr. Card had already expended some \$2,000. on the works with comparatively poor results he was not inclined to repair them. His license was consequently cancelled in September, 1906 (c).

Mr. Card built another ditch in the same year, 1889, on the north side of Lees Creek to water certain town lots in Cardston. The water in this ditch was also used to operate a grist mill. The scheme was transferred to the Electric and Milling Company of Cardston sometime about 1904. The irrigation works were allowed to fall into a poor state of repair, and the grist mill was apparently abandoned, so the license was cancelled in October, 1906 (c).

Another ditch was constructed out of Lees Creek just above Cardston by John A. Nelson and J. E. Lane for the irrigation of some ninety acres in that vicinity. This ditch seems to have been used a few years, but after the original owners moved away it was abandoned and very little information is available about it (c).

That seems to have been the extent of the early attempts at irrigation by the Mormons around Cardston. Their connection with the construction of some of the larger schemes in the district will be referred to later.

Maunsell Ditch Near Macleod.

In April, 1890, Edward H. and Henry F. Maunsell of Macleod had surveys made of a ditch for the diversion of water from the north bank of the Oldman River on the Peigan Indian Reserve for the irrigation of 655 acres about five miles west of Macleod. The construction of the ditch was commenced on the 1st of May and water was turned into it on the 15th of June, 1890. The works were completed on the 25th of June the same year. This is probably the earliest ditch on the Oldman River to be used to any extent. It was used for many years but gradually deteriorated and the license was cancelled in 1901; but was re-instated on the applicants stating that they wished to proceed further with the works. It was again used for sometime but was finally cancelled in March, 1913 (c).

Another early venture in the Macleod district was a ditch diverting water from the west bank of the Belly River at a point seven miles southeast of Macleod. In April, 1891, Robert Patterson had a survey made from this ditch. He commenced construction the 3rd of June the same year, but did not run water until June, 1894. In May, 1895, Brouard, Lachance, Patterson and Smith entered into an agreement for the joint use and maintenance of the ditch which had been constructed to serve some 700 acres. This area was later increased to over 1,000 acres. The scheme now stands in the name of Patterson, Lachance, Totham and McNab. Legally it is still in good standing, although a considerable portion of the works is in a rundown condition.

"The first Irrigation Company chartered by Act of Parliament in Canada was in 1891 when the Macleod Irrigation Company received its Charter "(f).

The Main object of the Company was to secure the unoccupied, available land in eight townships around Macleod, Viz:- Tp.8, Ranges 25 & 26; Tp.9, Ranges 23, 24, 25 & 26; and Tp.10, Ranges 24 & 25, with a view of putting whatever area was susceptible of irrigation under water.

The project was examined and reported on jointly by J.S.Dennis, Chief Inspector of Surveys and William Pearce, D.L.S., who recommended the sale at one dollar per acre (\$1.00) under certain regulations regarding the construction of irrigation works. No construction was undertaken however, and in January, 1896, G.A.Kennedy, Secretary of the Company was advised by the Secretary of the Department of the Interior that the time for commencement of the works had lapsed and that the matter of the reservation of the lands would be held in abeyance until such time as the Company again approached the Department.(c)

Mounted Police Ditch near Standoff.

The Royal Northwest Mounted Police began the construction of a small ditch near Standoff on the 24th of September, 1894. It diverted water from the Waterton River for the irrigation of some 120 acres of a river bottom land about three miles above the junction of the Belly and Waterton rivers. The ditch was completed on the 12th. of November, 1894 and the first water run through it on the 23rd.

of May, of the following year. Apparently this ditch was not used very long. It was finally cancelled in October, 1910. (c).

The beginning of Bigger Development.

This completes the account of one phase of irrigation development in this district--the small early ditches developed largely by individual effort for the irrigation of hay meadows in connection with the ranching industry.-- When we come to a discussion of its development on a larger scale, we find that its history in its early stages is so interwoven with the Coal and Railway activities that it is necessary to digress for a moment from the subject of irrigation and make a few remarks on the early history of these industries in order to present a proper background for the balance of our story.

Coalbanks.

The outcrop of coal on the river bottom at what is now Lethbridge, attracted the attention of explorers and hunters in the early days and the place was called "Coalbanks."

The ford on the Belly River at this point had been used by the traders from Montana dealing in Buffalo hides. Nick Sheran built a shack on the west side of the river about 1870 and engaged in the ferrying business. When the Mounted Police located at Macleod in 1874, they made a trail between Fort. Walsh and Fort. Macleod, which crossed the St. Mary River at Fort Whoop-Up² but when the Mounted Police supplies had to be brought from Fort Benton on the Missouri by hull

teams the freighters favored the Sheran crossing, as it was sometimes called, because by that route they escaped the crossing of several streams necessary on the Fort. Whoop-up route. Sheran put in his spare time mining coal and the return teams sometimes took loads back to Fort. Benton.

The Mounted Police at Macleod and some of the early settlers also got their coal here, but there was not enough demand for it to warrant any material development until the approach of the railroad gave promise of a market and an outlet. As the construction of the C.P.R. approached Medicine Hat, Sir Alexander T. Galt, High Commissioner of Canada, in Great Britain, conceived the idea of mining coal at Coalbanks and taking advantage of a direct water route from the mouth of the mine to the terminus of the railroad, to transport the coal by boat to Medicine Hat to supply the requirements of the railroad itself and to ship from there to eastern points by rail. So in 1882 a Company was formed for this purpose called "The Northwest Coal and Navigation Company", with William Lethbridge as President and Elliott T. Galt as Manager (d) (g).

Shipyard at Lethbridge.

It may not be generally known that Lethbridge once had a shipyard but in 1883 at the river bottom a busy scene was presented. On the stocks was the steamship Baroness, a boat of 210 tons and engines of 50 horse power. She was 173 feet long and 31 feet broad, of shallow draft and a stern wheeler. She was launched in July, 1883, and registered

in the "Port" of Winnipeg. Two other steamers were members of the fleet--The S.S. Alberta of 86 tons, 100 feet long by 20 feet broad and 31 horse power; and the S.S. "Minnow" 73 feet long, by 10 feet broad with engines of six horse power.--These two were built at Medicine Hat and were launched in 1884.

As a commercial enterprise these boats were not a great success for they could not navigate the Belly River at low water, and the return journey, with barges, was almost too much for them against the swift current. However these steamboats during the rebellion of 1885 were loaned to the Government and did great service in transporting troops and supplies, at Saskatoon, Battleford, Fort. Pitt, St. Albert, Edmonton and other points. One of the engines of the boats was still at work at No. 3 Galt Colliery until this mine was closed in 1924.

First Galt Mine Opened.

The Mine operated by the Northwest Coal and Navigation Company was registered as Coal Lease No. 4. It was on the east side of Belly River, approximately latitude 49°-42'-02". It was surveyed in the early part of the year 1882 and filed on later in the same year by W. A. B. Burdett-Coutts, per Sir Alexander T. Galt and assigned on October 17th, 1883, to the Northwest Coal and Navigation Company (d). There ^{was} ~~were~~ no shaft, the coal being taken out at a "day hole" or drift, at the bottom of the coulee and run on a tramway to the wharf on the bank of the river, where it was loaded on barges

and steamboats for conveyance to Medicine Hat. Elliott T. Galt's residence called "Coaldale" was built at the river bottom and was standing until the big C.P.R. Bridge was built in 1909.

Building of the "Turkey Trail".

It soon became evident that it was impracticable to supply the C.P.R. with coal by means of water transportation, so a charter was applied for and was granted to the Northwest Coal and Navigation Company, on October 18th, 1883, for a Railway line from Medicine Hat to the coal mines on the Belly River.

By a further Act of Parliament assented to April 19th, 1884, the Alberta Railway and Coal Company was incorporated with Sir Alexander T. Galt as President and Elliott T. Galt as Managing Director, with the same rights and powers to construct and operate the above named railway. But this latter Act was not to come into force until the rights and powers given it by Parliament had been given over to it by the Northwest Coal and Navigation Company (47 Victoria, Chap. 86) This was not done until 1889. The construction therefore was carried out by the Northwest Coal and Navigation Company.

No time was lost in building the railway. Construction was started in the Spring of 1885 and completed in September of the same year. It was a narrow gauge road commonly known as the "Turkey Trail" and formed a junction with the C.P.R. at Dunmore where large storage sheds were erected.

Lethbridge Started.

In May of the same year, that is 1885, a small section of the present townsite was sub-divided and started on top of the hill. This settlement was given the name Lethbridge after William Lethbridge of London, England, the first president of the Northwest Coal and Navigation Company. An inclined tramway was now built from the mouth of the mine to the prairie level where the coal was loaded on to narrow gauge cars. The site of this inclined tramway is still plainly visible just north of the C.P.R. Bridge. Afterwards shaft No. 1, located about 1,000 feet west of the present C.P.R. roundhouse, was sunk and the drift at the foot of the coulee and the inclined railway were abandoned. Thus ended Lethbridge's early dream of Navigation.

Railway Built from Lethbridge to Great Falls.

The Alberta Railway and Coal Company afterwards built the line from Lethbridge to Coutts which was opened to traffic December 8th, 1890. Likewise the same interests built, owned, and operated the Great Falls and Canada Railway which was completed from Coutts to Great Falls, October 1st, 1890.

Government Land Grants.

In those days the construction of a standard gauge railway carried a land grant from the Government of 6,400 acres per mile. After it was determined that it was not feasible to transport coal by water and the Coal Company had concluded to build a narrow gauge line from Dunmore to

Lethbridge, the Dominion Government fixed its land grant at 3,840 acres per mile for narrow gauge lines, and increased the grant to the usual 6,400 acres per mile when the line was broad gauged. But in view of the fact that the Company's line from Lethbridge to Coutts was built for the purpose of developing the coal fields at Lethbridge the Company was given the full grant of 6,400 acres per mile on the Lethbridge-Coutts line even though it was only a narrow gauge line. It did not however receive any additional grant when the line was standardized.

For the construction, then, of its lines from Dunmore to Lethbridge and from Lethbridge to Coutts the Company found itself in possession of more than a million acres of land scattered along its 180 miles of railway like the black squares of a checkerboard; for the land had to be situated within six miles on either side of the railway and only the odd numbered sections could be chosen. This regulation however was changed upon representations of the Company that ranching was the principal industry of the country and to enable it to deal with its land it was necessary for it to get it in solid blocks of alternate townships instead of alternate sections.

This land grant was located in what was designated by the Government as the "Arid District". In earlier days it had been a great winter grazing land for the Buffalo. After they had been practically exterminated the cattle men came in and this portion of Southern Alberta formed one of the best grazing areas in the northwest. They paid no taxes and everything was free. But "them days is gone forever".

Alberta Irrigation Company Organized.

As already noted the Mormons had settled around Cardston. Being accustomed to irrigation they saw great possibilities in the vast fertile plains to the east and north of their settlement if the deficient rainfall could be supplemented by irrigation. With a view of colonizing and irrigating these lands Charles Ora Card undertook to purchase 116,000 acres and John W. Taylor 595,000 acres on the terms of a rental payment of two cents per acre each year for four years from 1892 to 1895, and then a purchase price of \$1.00 per acre spread over eight years with interest at six percent.

These contracts were made in December, 1891. In December of the following year notice was given that application would be made to Parliament at its next session "for an Act to incorporate a Company for the purpose of constructing and operating irrigation ditches or canals in that portion of the District of Alberta lying south of the fiftieth parallel of latitude where it passes through the said district". The original purpose of this application was to obtain an Act which would assist Mr. Taylor and his associates in their colonization and irrigation enterprise. Sir Alexander and Elliott T. Galt allowed their names to be used in the application to assist in getting the Act through Parliament, but they did not intend to take an active part in the affairs of the new Company. However when the Act was assented to April, 1893, and the Alberta Irrigatio_n

Company was formed, Sir Alexander Galt was made President. Upon his death in September of the same year, he was succeeded as President of the Alberta Railway and Coal Company (and presumably of the Alberta Irrigation Company) by Mr. Peter Redpath, who died three months later when Elliott T. Galt became President.

Lethbridge Board of Trade takes a Hand.

By this time the agitation for Irrigation in this district was so well advanced that in the Lethbridge Board of Trade in 1893 it was moved by C.A. Magrath and seconded by W.A. Galliher "That the promotion of Irrigation in this district of Southern Alberta is absolutely necessary for the development of the District, and it is deemed advisable to place the matter properly before the Government and that 'a Joint Commission' composed of men from Lethbridge, Macleod, and Calgary be appointed to collect evidence, statistics, etc., and that we set aside \$200. to cover our share of the necessary expenses."

We have already stated that through the efforts of William Pearce, J.S. Dennis and others, an irrigation Act had been introduced in Parliament that year and was passed in 1894. At the same time the Government adopted the policy in connection with irrigation development that it would determine what was feasible in the way of irrigation and then leave it to private enterprise to do the rest. In line with that policy Mr. Dennis (Now Col. Dennis) undertook topographical surveys and stream flow measurements to determine what water supply was available and what land could be irrigated.

But it did not prove to be an easy matter to interest sufficient capital and enough people to construct a big irrigation system and colonize the lands. So John W. Taylor failed in his ambitious enterprise and his contracts for the purchase of the lands were cancelled in 1895.

One of the difficulties encountered by Taylor and by the Company was that the lands were located in blocks of alternate townships which made irrigation development in a practical way impossible. Repeated representations to the Government and frequent visits to Ottawa by Mr. Galt and Mr. Magrath were made in this connection, but it was not until 1896 when a Western man, Hon. Clifford Sifton (Now Sir Clifford) who was familiar with the conditions, was appointed Minister of the Interior, that the Company's land grant was consolidated into a solid block and the Irrigation Scheme became feasible.

In the meantime the Alberta Irrigation Company had not exercised the functions for which it was organized and as the time for beginning construction had been limited to three years from the date of the incorporation and was now about to expire, a new Act was passed in April, 1896, to revive and amend the previous Act. In the following year Mr. George G. Anderson, an eminent irrigation engineer of Denver, Colorado, was engaged to report on the feasibility and cost of an irrigation system to serve the Company's lands. So in 1898 the actual location

of the canal was started by the Alberta Irrigation Company. E.T.Galt was then President, C.A.Magrath, Manager, G.G.Anderson Consulting Engineer, C.F.P.Conybears, Solicitor, and Hugh MacBeth Accountant.

Work Starts on the Big Ditch.

Mr.Anderson started work with his parties in July, 1898, A.M.Grace being Chief Assistant Engineer; and by December they had about forty-five teams at work on the first division.

The Chief Contractors for the ditch were the President and High Council of Latter Day Saints--The Mormon Church-- and the sub-contractors, laborers and teamsters were principally Mormon farmers who came to settle in Canada. These men were paid one-half in cash and one-half land; the land with water right, being valued then at \$3.00 an acre, and was located at Magrath and Stirling. These towns were then just starting by men working on the ditch. Cardston was an older settlement.

The whole work was done with teams and all supplies and lumber for the structures had to be teamed from Whoop-Up siding. This is not "Fort.Whoop-Up" but a siding on the old Crows Nest Line about five miles south of Lethbridge, in Section 8, Tp.8, Range 21, W 4th. M. The intake on the St.Mary River at Kimball was about forty miles south and eighteen miles west of that point. Over a million feet of lumber was required, most of it being used in the headworks and flumes near the upper end of the system. In wet seasons the work of teaming presented serious difficulties, as some of the creeks and coulees were at

times like rivers and there were no bridges. Indians and anyone else with teams could get work. It is said that lumber was scattered over the prairie all the way from Whoop-Up to Kimball where the Indians had got stuck and thrown off and abandoned part of their load. The structures were all substantially built. Timber was used throughout, there being no concrete at all. Neither were any steam shovels or dredges employed in the excavation, which amounted to 1,121,000 cubic yards.

C.P.R. Gives Assistance.

It is interesting to note that at this time, 1898, the C.P.R. and particularly President Shaughnessy, were much interested in the scheme and promised a bonus of \$100,000 to the Company to be earned according to the number of settlers and amount of traffic they brought. Afterwards an account of the difficulties entailed in estimating these items the bonus was changed to a straight grant of \$5,000 each six months until the bonus was paid out.

In 1899 by Act of Parliament the name of the Company was changed from the Alberta Irrigation Company to the Canadian Northwest Irrigation Company. In the meantime construction was progressing rapidly.

Contract with City of Lethbridge.

As projected the canal was to irrigated land adjacent to Magrath and the vally running between Milk River Ridge and the Rolling Hills with Stirling as the terminal point. When the people of Lethbridge found that the Company did not intend to build the canal to Lethbridge they were very much exercised. So the town, under Dr. Mewburn as Mayor, induced the Company under certain conditions as set forth in By-law No. 107 to build into Lethbridge. This by-law provided that "In consideration of \$20,000 paid by the town to the Company, they would build the canal to the town limits and deliver for the use of the inhabitants, for fire, domestic, and cultivation purposes, five cubic feet a second during the irrigation season, for twenty-five years free of rental and spend \$4,000 in making ditches in town."

The ratepayers voted on this by-law on the 29th of June, 1899--85 for and 1 against.--

The Company therefore changed its plans accordingly and brought its Main canal into the Lethbridge District. This of course necessitated a considerable amount of additional work, including a cut four miles long and eighteen feet deep through the Rolling Hills, as well as a flume 1,400 feet long across the low ground on the west shore of fifteen Mile Lake.

Another By-law No. 108 was passed on the same date by a vote of Eighty-four for and two against, which was in brief as follows:--"The Company will in consideration of the sum of \$10,000 paid by the Town, construct and during the period of twenty-five years maintain, an irrigation ditch

wholly or partially within a distance of five miles from the town, being an extension of an irrigation canal capable of delivering 135 c.f.s. to the lands hereinafter mentioned-- and during the irrigation season supply 135 c.f.s. to twenty thousand acres of Company lands located within a radius of ten miles from the centre of the City."

Besides the above it appears that an agreement was made in which the Company agreed to spend or advance to the Town \$1,000. for planting trees. To the foresight of the officials of the town and the Company of that day, we owe the credit for the splendid showing of trees along our boulevards that are now the pride of our City. Mayor Mewburn is credited with being the first man in Lethbridge after the ditches were built, to plant trees on his lawn and on the boulevard in front of his home.

Upon the completion of the canal T.M. Evans was appointed Superintendent of Operation and Maintenance, which position he held until his death in December, 1912.

First Irrigation Water Reaches Lethbridge.

WATER was turned in at the head of the canal on the 4th. of July, 1900. It reached the limits of the town of Lethbridge at three o'clock in the afternoon of September 4th, 1900, and to the particular delight of the small boys as well as the citizens in general, it flowed through the ditches along the streets of the town. The laterals into Magrath and Stirling were not completed until the

following year, water reaching the town of Stirling July 12th, and Magrath July 25th, 1901.

The Governor General's Visit.

The canal was formally opened by His Excellency The Earl of Minto, Governor General, on the 14th of September, 1900. The following account of the Governor General's visit on this occasion is quoted from an extensive report which appeared in the Manitoba Free Press, October 6th, 1900/-

"There was no formal celebration of the entrance of the water from the Irrigation Canal into the town. Neither was there any formality to mark the completion of the canal system and the turning in of the water at the intake head-gates down south near the Montana Border. As the Governor General and Lady Minto were at that time on their way homeward from the coast on their return from their tour of Western Canada which had taken them as far as Dawson City, they were invited by Mr. Galt to spend a day in seeing something of the Irrigation Canal and of the broad plains of Southern Alberta, rich in fertility of the soil but lacking heretofore in moisture, and watered now by a new made river, brought into use by the hand of man and given a winding course to make possible the irrigation of hundreds of thousands of acres that need only an ample and regular supply of moisture to make them ready for rich productivity.

A Accordingly, on September 14th. the vice-regal party having arrived in Lethbridge the preceding evening as the guests of Mr. Galt were taken over as much of the work as could be viewed in one day, their engagements not allowing a longer stay. As the occasion was entirely of the nature of an informal visit, only a small party was made up. Two of the highest dignitaries of the Mormon Church, Presidents George Q. Cannon and Joseph F. Smith, had been invited from Salt Lake City to meet the Governor-General and the Countess of Minto. President Cannon, accompanied by his daughter and President Smith, whose wife and sons were with him, had come up several days previously from Great Falls, Montana, the terminus of the Alberta Railway and Coal Company's line, in a special train with Mr. Galt, Mr. C. A. Magrath, Manager of the Canadian Northwest Irrigation Company, and Mr. P. L. Naismith, Manager of the Alberta Railway and Coal Company, ex-Judge Thomas Brady, of Great Falls, the attorney for that Company across the line and Hon. Timothy Collins, State Treasurer of Montana who is also a resident of Great Falls, joining the party.

The Vice-regal party was taken out to Stirling on a special train. At Stirling the Mounted Police escort which had ridden out from Lethbridge the day before, was found camped. Saddle horses had been brought for those of the party who chose to ride, and there were conveyances for the others.

Before the departure of the vice-regal party from Lethbridge, the Governor General was presented with an address from the corporation of the town. In his reply he remarked that it was not his first visit to Lethbridge. He had been there in the fall of 1885 with Lord Lansdowne when he was the guest of Mr. Galt, in a house near the river where the coal mining was done at that time. Since then the mining business had greatly increased and the town in its present location had grown from absolutely nothing to its present size, and would continue to grow. He had been greatly impressed with the changes and improvements which had taken place. The people of Lethbridge had great reason to be thankful for the extraordinary energy shown by Mr. Galt in bringing this great irrigation project to a satisfactory conclusion, which would be the means of transforming Southern Alberta."

Irrigated Land at \$3.00 an Acre.

The canal having been completed and primed in the fall of 1900 was ready for operating in 1901 but beyond the Mormons who had land around Magrath and Stirling, there were very few settlers and the demand for irrigated lands was very, very slack. Parties of men were brought from all over the border states, but sales were very few. In fact the weather was against selling, there had been lots of rain all the time the canal was building, and the men coming in would say we needed drainage more than irrigation; if it wasn't raining it was blowing, and after a man had been out all day on the prairie as it was then, not a fence or a piece of cultivated land to be seen, he was depressed, for

the Country was certainly not inviting in those days. The Company was selling the land at eight to ten dollars an acre and very liberal terms were given. In fact at one time the farmer was given an option to purchase at the end of two years, i.e. he had the land for two years for nothing. But there was no rush. One criticism that was heard was that there must be something the matter with it or they would not sell irrigated land at \$8. an acre.

However out of all the men who came in, one or two would occasionally stick and buy a quarter section. At first the Company tried to limit the farms to 80 acres which was the average amount the Magrath and Stirling people took, but soon found that impossible.

Demonstration Farm Started by W.H.Fairfield.

To encourage and instruct the new settlers and to demonstrate what could be done under irrigation, a model farm of 300 acres was established adjoining the old grade of the Crows Nest Line, three miles southeast of Lethbridge, and W.H.Fairfield, then Assistant Professor of Agriculture, and Horticulture and Supt. of The Experimental Station at the University of Wyoming was put in charge; and his advice and experience made available for the settlers on any matters pertaining to irrigation. Mr.Fairfield arrived in April,1901 and immediately set to work getting the land in shape. He was then and still is a great enthusiast for alfalfa and in a couple of years had 100 acres well enough cultivated and levelled to seed to Alfalfa. Some of that original seeding is still producing after more than twenty years.

Sugar Factory at Raymond.

In 1900 the St. Mary River Railway was built as far as Spring Coulee. The next year, Jesse Knight, a wealthy Miner from Utah, whose two sons had previously secured land at Spring Coulee, and were engaged in ranching, came up and formed a Company to build a sugar factory and establish a cattle ranch. During that summer the town of Raymond was located and surveyed and the location of the sugar factory decided on. This location was chosen because of its reservoir and drainage facilities. The water supply was a very important factor as it required about eight acre feet a day or nearly one acre foot to each forty tons of beets to run the factory. This supply had to be stored because the factory season did not open until about the time the irrigation season closed. The reservoir at Raymond had a capacity of about 900 ac.ft. or sufficient for about three month's run for a factory of three hundred tons daily capacity. The factory was completed in 1903 and the first beets sliced November 2nd, of that year.

In the 1904 season it ran 40 days and handled 11,900 tons of beets which yielded 13.7% sugar ^{or} ~~and~~ 3,160,000 pounds.

The biggest run in its history was in 1906 when it handled 18,293 tons of beets and made 4,673,000 pounds of sugar.

It continued to operate each season until 1914 but never had a sufficient supply of beets to make its operation a financial success. It was dismantled and the machinery moved to Idaho in 1917.

Varied Vicissitudes.

In looking back over the history of irrigation in Southern Alberta during the past forty years one is struck with many peculiar coincidences which have affected the progress of irrigation development. Mother nature is very capricious and in nothing does she display her fickleness more than in the manner in which she dispenses her blessings of rainfall.

In the first place, before the country was settled it was known as the "Arid Region". That in itself was a warning and a challenge to those who would venture into it. Those who did venture in before or at the time of the construction of the C.P.R., across the Prairies, apparently found justification for the title that had been imposed upon it, and did not consider that the country would ever befit for agricultural pursuits. Nevertheless some ranchers settled and ventured to build irrigation ditches to water their hay meadows. But the plentiful rainfall in 1884 raised doubts in the minds of many of them as to the necessity of irrigation and they abandoned their ditches. Then came another series of dry years, probably the driest in the history of Western Canada, and again the verdict that irrigation was a necessity, became practically unanimous. This resulted in the events already recorded, the passing of the Irrigation Act, the promotion of the Alberta Irrigation Company, and other efforts to develop irrigation on a large scale. But even before their plans could be consummated increased rainfall again threw discouragement in the way of the promoters and doubled the difficulties that had to be overcome. In the face of the abandonment of many of the small

schemes and the belief on the part of many that the climate was changing and that irrigation after all was not necessary, it was through the almost superhuman exertions of E.T.Galt, and C.A.Magrath that the Alberta Irrigation Company's scheme was successfully launched and completed. Now that it was constructed and in operation in spite of the oft repeated and possibly not always jocular remark during construction, that a drainage ditch would be more useful than an irrigation ditch, Mother Nature with an outburst of rage at man's impudence in assuming her prerogative of supplying water to the thirsty soil tried to destroy the works he had so laboriously constructed. The increase in rainfall which had been noticeable since 1895 culminated in 1902 with a record of more than twenty-eight inches. There were three distinct floods, May 19th, June 2nd, and July 1st to 4th. The precipitation for the three months, May, June and July was 22.9 inches, and in July prayers were offered in St. Augustine's Church for dry weather.

Floods of 1902.

Although there were serious washouts and the irrigation system was put out of business for practically the entire season, it was a great credit to the engineers and builders of the structures that through all three floods not a timber on any of them was displaced. On the Pothole at Magrath the flood was a raging torrent washing out the embankments on both sides of the dam and headgates. At Kimball the channel of the St. Mary River was altered to such an extent that

a dam had to be built across the main channel and a new intake in line with the dam constructed 600 feet above the headgates. Originally no dam was required.

It is a striking coincidence that the experiences of the Alberta Irrigation Company with the floods of 1902 had its parallel in the misfortunes of the Lethbridge Northern scheme which suffered similarly in the first year of its operation, 1923, from an unprecedented flood in the Oldman River.

The farmers who settled in the Magrath and Stirling Districts during the wet period, 1899 to 1902, and who had not been here during the preceding dry period, naturally thought a water right would be of doubtful benefit; and hence most of them chose to take water for only about one-fourth of their land. That accounts for the insufficient water rights in those districts today and for the agitation of the past few years to get more water.

Thus has a more or less erratic climate first encouraged and then impeded irrigation development. We have on an average four or five dry years to one wet one, yet the pendulum seems to swing almost as far away from irrigation in that one year as it swings towards it in the other four or five. Hence the development of a full one hundred percent irrigation policy even among those who live on irrigated land and profess to believe in irrigation, has been slow.

Alberta Railway and Irrigation
Company Organized.

But to come back to the matter of our History.

In September, 1904, the Alberta Railway and Irrigation Company was formed, being successor to the Alberta Railway and Coal Company, The Canadian Northwest Irrigation Company, and the St. Mary River Railway Company.

E.T.Galt was President, C.A.Magrath Land Commissioner and Assistant to President, T.M.Evans Supt. of Canals, C.M. Arnold, Engineer, T.D. Kevin Supt. of Railways, and W.D.L. Hardie, Mine Superintendent; G.G.Anderson was still Consulting Engineer and A.M.Grace, Engineer in charge of Construction of the Milk River Canal which was then under construction.

In 1912 the C.P.R., took over the interests of the A.R. & I. Company and has since that time operated the Railway, Irrigation Works, and Coal Mines.

Capacity of A.R. & I. System.

As first constructed, the A.R. & I. Canal had a capacity of 400 cubic feet per second. It has been enlarged and extended from time to time until it now has a capacity of 1,000 c.f.s., with a contemplated capacity of 1,200 c.f.s., when improvements now in progress are completed.

Quantities of Material in System.

As already stated the original construction required 1,000,000 Ft. B.M. of lumber and the excavation of 1,121,000 cubic yards of earthwork. Later enlargements and extensions called for 3,250,000 Ft.B.M. and 3,800,000 cubic yards of earth, or a total for the system as it now is of 4½ million feet B.M. of lumber and nearly five million cubic yards of earthwork. These figures do not include annual repairs and renewals. Nor do they include the Milk River Canal on which nearly 300,000 feet B.M. of lumber was used and nearly 700,000 cubic yards of earth excavated.

The International Problem.

One other point which has had an important bearing on the question of irrigation development in this district should be mentioned here. The source of water supply for the vast area of land south and east of Lethbridge is from streams which have their origin in the United States and flow northward into Canada. This created an International problem.

The Canadian Government granted to the Canadian Northwest Irrigation Company the right to divert the entire flow of both the St.Mary and the Milk Rivers, and as already recorded, the Company proceeded with the construction of its canal from the St.Mary River. This aroused the interest of the Montana people and the fear that they would be deprived of water that they claimed belonged entirely to them. As construction on this side of the line proceeded the agitation in Montana grew stronger. In the Great Falls Daily Leader

of April 9th, 1900, appeared an article headed "Senator Carter may prepare bill for survey to provide for keeping our Rivers at home". Surveys showed that it was a comparatively simple matter to divert the St. Mary River over into the Milk River. Such a procedure would apparently mean ruin to the Canadian Company. Bearing out this idea the Great Falls Tribune of November 26th, 1900, carried an article headed in big type "Planning to Outwit Canada and Keep all the Water Flow from St. Mary's once Diverted to Milk River will be kept within the Bounds of the United States".

The Milk River also crosses the line from Montana into Canada but after flowing for some 200 miles in Canada returns to the United States. Water diverted from the St. Mary River into the Milk River would still therefore flow through Canadian territory. The impression seemed to prevail in some quarters in the United States that although it was true that the water which was dropped into the Milk River would cross the line into Canada; yet on account of the Milk River Ridge which parallels the Milk River in Canada it would not be possible for the Canadians to take the water out of the Milk River and use it in Canada. It has been stated that a report by U.S. Engineers to that effect was on file in Washington, but we are not able to confirm that statement. Anyway the United States authorities claimed as an alternative that they would continue their diversion canal south of the line until it would drop into one of the lower tributaries of the Milk River and not enter Canada at all.

Milk River Canal Built.

In May, 1903, the Great Falls Leader announced that surveys for the diversion of the St. Mary River into Milk would be completed that year by the Engineers of the United States Reclamation Service and they expected construction of the canal to follow immediately. Of course this was very disquieting to the Canadian interests and it was important that something be done to forestall the loss of their water supply. Their response was prompt and decisive. Before the end of the year the construction of a canal to take water out of Milk River on the Canadian side was under way by the Canadian Northwest Irrigation Company. Fourteen and a half miles of this canal was constructed crossing the Milk River Ridge to a coulee running into Verdigris Lake, and water was turned into it November 17th, 1904. A large party of Lethbridge people went down for the ceremony.

The canal has never been used but it effectually did one thing; it demonstrated beyond dispute that in the event of failure to reach an understanding with the United States over this matter, that any water that country would attempt to divert from the St. Mary River in Montana, and to the detriment of the Canadian canal, that Canada could take it out of the Milk River and carry it northward along the eastern slope of the Milk River Ridge to a point a few miles northwest of Raymond, where it would join the railway Company's canal as it enters the Rolling Hills.

The International Waterways Treaty Signed.

In the meantime the Engineers of the United States Reclamation Service had found that while the All-American route for their diversion canal was possible from an Engineering standpoint, its cost made it prohibitive. The people of the Milk River Valley in Montana therefore feeling that their rights were endangered by the construction of the Canadian Canal, now urged their Government to enter into an agreement with Canada on the question of the joint use of these streams.

Discussions were started in 1904 which finally resulted in a treaty being signed between the United States and Great Britain, July 11th, 1909, which among other things, provided "That the St. Mary and Milk Rivers and their tributaries (in the State of Montana and the Provinces of Alberta and Saskatchewan) are to be treated as one stream for the purpose of irrigation and power, and the waters thereof shall be apportioned equally between the two countries". The treaty further provided for an International Joint Commission consisting of three members from each country to have jurisdiction over the administration of the treaty. Thus was settled amicably what threatened at one time to develop into a very difficult and complicated international controversy.

Still there were questions pertaining to the manner in which the terms of the treaty were to be carried out and how the division of the water was to be made that were not set forth in the treaty itself but were left to be determined by the International Joint Commission.

Since the two Governments took almost diametrically opposite views as to what the Treaty meant, a long period followed during which engineering investigations and extensive stream measurements were conducted by both Governments and the controversial points argued before the Commission. So it was not until the 4th. of October, 1921, that a decision was rendered by the Commission settling the details of the division of the waters of these international streams, between the two countries.

It is interesting to note that the first Chairman of the American Section of that Commission, which came into existence in 1911, was Senator Carter, who was active on the American side of the issue in its earlier days; and C.A. Magrath, as Manager of the Company diverting the water in Canada, and therefore active on the Canadian side, eventually found himself Chairman of the Canadian Section of the International Joint Commission. Senator Carter died shortly after his appointment to the Commission.

Recent Developments.

This ends the story of what may be termed pioneer irrigation development in Southern Alberta. A very brief reference will be made here to the later developments not with the intention of giving full details, but merely to bring the history up to date, with respect to the main features.

The Lethbridge Northern Irrigation
District.

As early as 1910 a petition was forwarded to the Government by settlers in the Iron Springs District for the construction of an irrigation system to supply water to their land. Their proposal was to pump water from the Oldman River immediately south of Iron Springs, but as this involved a lift of 300 feet, very little study was required to show that it could not be done within the limits of reasonable cost.

Several other possibilities were inquired into but the first actual surveys were made by the Dominion Government in 1913 when the plan of taking water from the Oldman River on the Peigan Indian Reserve west of Macleod, was recommended as the most feasible scheme. The surveys were continued each season to define in greater detail all the elements of location, cost and areas which could be irrigated.

To "Old Man" Pearson is due the credit for initiating the scheme, and to the Lethbridge Board of Trade under the leadership of G.R. Marnoch must be given the credit for the persistence which finally overcame all the hinderances which stood in the way of its realization. We will not at this time go into a discussion of the various steps which led to the enactment of the Irrigation District Act and the guarantee of the bonds of the Lethbridge Northern Irrigation District, which made the financing of the construction of the system possible. That is a story in itself which should be recorded in full and we would

suggest that Mr. Marnoch is the man to write it.

The Lethbridge Northern Irrigation District was erected by vote of the landowners on the 20th. day of September, 1919, the vote being 288 in favor to 8 opposed. The bonds could not be disposed of on acceptable terms until they were guaranteed by the Provincial Government. This was done in the spring of 1921 and a contract was let June 1st, 1921, to Grant, Smith & Company & McDonnell, Ltd., covering the excavation of 6,300,000 cubic yards of material. The earthwork contract was completed October 19th, 1922, and the structures by May, 1923.

The system covers an irrigable area of 105,000 acres. The cost of construction apart from interest and carrying charges was \$4,171,580.35.

Water was turned into the Canal May 1st, 1923, but on the last day of May and the first few days of June an unprecedented flood in the Oldman River washed out two or three miles of the Main Canal and two sections of the flume over the Oldman River. These damages cost the District nearly \$100,000. and required all summer to repair, so that no more water was run until October. In 1924 the system was operated for the full season and nearly thirty percent. of the total irrigable area was irrigated.

The Taber Irrigation District.

The Taber Irrigation District was the first one to be established under the Irrigation District Act of Alberta. The farmers in the district began negotiations with the C.P.R., about 1913 for a water supply for their lands. The Company had constructed reservoirs in Chin Coulee for the storage of the waste and surplus water from their Lethbridge System, and surveys had shown that this water could be economically applied to the lands around Barnwell and Taber. The original proposition was that the Company should build the irrigation works and accept contracts from the individual landowners, the contracts to be secured by mortgages on the farm lands. But this was not practicable, so the Alberta Government was asked to pass Legislation which would enable the farmers to organize a district to issue bonds to cover the cost of irrigation works. The Irrigation District Act was passed by the Alberta Legislature in 1915 and in the same year the Taber Irrigation District was erected. After a number of delays, negotiations with the C.P.R. were completed in the spring of 1919, and in July of that year the landowners voted unanimously for the issue of bonds for the construction of their canals. The C.P.R. accepted the bonds for the actual cost of the construction of the works, which amounted to \$16.50 per irrigable acre, and agreed to deliver water at the head of the Taber Canal for the irrigation of 17,000 acres for an annual operation and maintenance charge of fifty cents per acre (50¢). Construction was started July

24th, 1919, and completed in October, 1920. The first water was turned into the Canal September 10th, 1920, and the canals were primed and about 2,000 acres of land were fall irrigated that season. The system is operated by the farmers themselves, and has been successful from the start.

The United Irrigation District.

Reference has already been made to the irrigation of a small portion of the Cochrane Ranch in the early days. This big tract of land was purchased and colonized by the Mormon Church and as early as 1906 the Alberta Stake of Zion (The Mormon Church in Alberta) made application to the Dominion Government for the right to irrigate the area lying between the Belly and Waterton Rivers, and went to considerable expense making surveys for the irrigation of this tract of some 45,000 acres. Authorization was granted in 1907 for the diversion of water from the Waterton River for this purpose but the surveys showed that the cost would be excessive so no construction was undertaken and the authorization was cancelled in 1910.

Afterwards another survey indicated that it was feasible to divert water from the Belly River to serve a large portion of this land, and in the dry season of 1918 the farmers in the neighborhood of Hill Spring and Blenwood, having lost their crops through drought, determined to build the ditch themselves and actually started work on it. But proper surveys had not been made and the authority of the Government had not been obtained, so naturally very little was accomplished.

In March, 1919, the Alberta Stake of Zion made a new application for water, this time from the Belly River instead of the Waterton, and the Dominion Government undertook to make a complete survey of the scheme.

In August, 1919, the United Irrigation District was erected. In March, 1920, another district comprising lands adjoining the United District on the north and east was erected under the name of the Lone Rock Irrigation District. Since these two districts would be served by the same system of canals the majority of the land owners in the Lone Rock district petitioned the Minister of Public Works of Alberta to be included in the United District. Consequently by order of the Minister, signed March 2nd, 1921, the Lone Rock Irrigation District was dissolved and the lands which it comprised were added to the United Irrigation District.

Under the original Memorial of the Alberta Railway and Irrigation Company the water supply of the Belly River was granted to that Company, and naturally its claims must be surrendered or cancelled before the Government could approve another application. The Company offered no objection to the surrender of its rights in favor of the new district, so this matter being satisfactorily adjusted, authorization for the construction of the system was issued by the Minister of the Interior, June 29th, 1921. A favorable vote followed on August 24th, for the issue of bonds for \$645,000. which were afterwards guaranteed by the Provincial government and construction was started on October 12th, of the same year.

A feature of the construction of this system was that the contracts were let to the ratepayers in preference to regular contractors.

Construction was completed and water turned into the system in the fall of 1923. The system covers some 36,000 acres of irrigable land and cost approximately \$15.00 per irrigable acre.

Other Irrigation Districts.

This ends the record of actual construction to date (March, 1925,) but activities looking to future development might be briefly mentioned.

The South Macleod Irrigation District.

In June, 1921, the owners of land south of the town of Macleod and west of the Belly and Waterton Rivers applied to the Provincial Government for the formation of an irrigation district. Their application was approved and the South Macleod Irrigation District was erected by order dated September 21st, 1921. Complete surveys had been made by the Dominion Government, the plans approved by the Minister of the Interior, and a water supply from the Waterton River reserved. The Provincial Government also satisfied itself that the scheme was feasible. But construction has been delayed until the lands under the Lethbridge Northern Project across the river from it, have been colonized and the demands for irrigated lands warrant the opening up of another large tract which is now only sparsely settled.

The district covers an irrigable area of some 60,000 acres and the estimated construction cost is \$30. per acre.

The Magrath and Raymond Districts.

The Magrath Irrigation District was erected June, 1924, for the purpose of securing a water supply from the C.P.R., for the irrigation of additional lands west and north of the town of Magrath but no contract has yet been entered into.

The formation of the Raymond Irrigation District is pending at the time of this writing for the purpose of acquiring an additional water supply from the C.P.R. for lands in the vicinity of Raymond which already have a partial supply.

New Sugar Factory at Raymond.

The announcement of the Utah-Idaho Sugar Company in February, 1925, that they would erect a beet sugar factory at Raymond this year gave impetus to the extension of irrigation in these two districts.

The Mountain View Irrigation District.

The formation of the Mountain View Irrigation District, covering a tract of land in the neighborhood of the village of Mountain View, east of the Belly River and southwest of Cardston was approved by the Minister under date of August 2nd, 1923. Construction was in progress during 1924 by the farmers who are building the ditch as a private enterprise without the issue of bonds. It will take its water supply from the Belly River and irrigate about 2,500 acres at an estimated cost of \$13.50 per acre.

The Lethbridge Southeastern Project.

To the south and east of the City of Lethbridge are large tracts of fertile land capable of irrigation but not covered by works already constructed. A vast amount of engineering work has been done, both by the Alberta Railway and Irrigation Company and its predecessors and by the Irrigation Department of the Dominion Government, to ascertain what areas can be irrigated, what water supply is available, and what canals, reservoirs and other works are necessary to serve them. Complete engineering data have been compiled covering these points, and summaries of them published in the Government reports indicate that it is feasible to irrigate about 600,000 acres under this project in addition to the lands already irrigated by the A.R. & I. System and the Taber Irrigation District, at a construction cost of about \$40. per acre.

This tract is bounded on the west by the St. Mary River; on the north by the Old Man River; on the east by Forty Mile Coulee and Pakowki Lake and on the south by the Milk River. It would utilize the total available water supply of the Waterton, Belly, St. Mary and Milk Rivers, and require the development of several large storage reservoirs.

The irrigation of the entire tract was included in the original authorization granted to the Alberta Irrigation Company in 1893, which covered that portion of the district of Alberta lying south of the fiftieth parallel of latitude and west of the one hundred and tenth meridian west of Greenwich. Its history therefore is intimately connected with events already related in this sketch and which need not be repeated.

The Future.

It is not within the province of the historian to deal with prophecy, but perhaps we may be permitted to express our conviction that the time will come when every available source of water supply will be fully utilized for the irrigation of these lands in Southern Alberta which possess such abundant fertility, in a climate so blessed with sunshine, in a country whose resources are beyond calculation, and with a people whose courage will ultimately prevail over all obstacles.

Lethbridge, Alberta.

March

1925.

APPENDIX "A"

Early Coal Leases in Alberta.

The genesis of the coal development at Lethbridge was brought about somewhat as follows:-

E.T.Galt in 1879 was Assistant Indian Commissioner. In travelling through the Country he crossed the river at Sherrins, and noticed the coal seams exposed. His father was High Commissioner in London, and according to his life written by Skelton was keenly interested in Western Development, and he doubtless heard through his son as to the present Lethbridge Coal field. Sir Alexander got certain of his friends in London to join him in securing leases under the Coal Regulations. Mr.Bompas was the applicant for one lease, Mr.Burdett Coutts, the Right Honorable W.H.Smith and Sir Alexander Galt himself the fourth.

The coal measures along the Belly River at Wood-pecker, (Taber) at the coal banks and on the Blackfoot reserve were examined by Captain Bryant, and it was decided to operate the seam at Lethbridge. Then legislation was obtained to form the Northwest Coal and Navigation Company.

Mr.Stafford, for many years the Superintendent of the A.R.& I. Company's Collieries, came west with Captain Bryant and had a good deal to do it is understood, with the determining of the location where those interests were to engage in coal mining.

The first coal lease registered was the Sharon Claim, just across the river from the present City of Lethbridge. George C. Bompas of the Northwest Coal and Navigation Company was granted a lease, July 11th, 1882, on the west side of the Belly River in approximately latitude $49^{\circ}-47'-08''$ and longitude $32'-20''$ east of Fort Macleod. This location would be about six miles north of the City, but there is some doubt as to the accuracy of this location. This was Coal Lease No. 2. Coal Lease No. 3, was on the Bow River on the Blackfoot Indian Reserve, filed on by the Right Honorable W. H. Smith of the Northwest Coal and Navigation Company, 29th of July, 1882. Coal Lease No. 4 is described in this paper, page Ten. Coal Lease No. 5, was on the Bow River in the Blackfoot Indian Reserve, filed on by Sir Alexander T. Galt, 29th, July 1882. The Northwest Coal and Navigation Company afterwards purchased some ten thousand acres of coal lands on either side of the river near Lethbridge and this area is still held by its successors, The Canadian Pacific Railway Company.

APPENDIX "B"

Abstract of letter from E.H.Wilson to
C.Raley March 27/24.

The Northwest Coal & Navigation Company was formed in 1882. Mr. Wm. Lethbridge (a member of the well known firm of W.H. Smith & Son of London, England,) was President and remained President until the Company was absorbed in 1889 by the Alberta Railway and Coal Company, when he retired.

Sir Alexander T. Galt, G.C.M.G., was President of the Alberta Railway & Coal Company from its formation till his death in 1893, when he was succeeded as President by Mr. Peter Redpath, who died three months later, when Mr. E.T. Galt became President.

Mr. E.T. Galt was Manager of the Northwest Coal and Navigation Company from its inception and when that Company was absorbed by the Alberta Railway and Coal Company he became Managing Director of the latter Company until he succeeded Mr. Redpath as President.

Mr. E.D. Barclay succeeded Mr. Galt as Manager.

If you want any further information regarding the other Companies forming the "Group" I may add that the Lethbridge Land Company, Limited, was formed in 1888, the Chairman being the late Mr. Adrian C.F. Hope of London, England.

The Canadian Northwest Irrigation Company (previously the Alberta Irrigation Company) was formed in 1898 with Mr. E.T. Galt as President.

The St. Mary's River Railway Company was formed in 1901 with Mr. P.L. Naismith as President.

These four Companies (Alberta Railway & Coal Company; Alberta Irrigation Company; Lethbridge Land Company, Ltd.; and the St. Mary's River Railway Company) were amalgamated in 1904 by Act of Parliament and afterwards known as the Alberta Railway and Irrigation Company. Mr. E. T. Galt as President of the amalgamated Company until 1912, when the C.P.R. Company purchased the shares of the Company, which it has since controlled.

Coutts, as you know, was named after the Baroness Burdett-Coutts, a large shareholder in the Company.

Stirling, was named after Mr. J. A. Stirling, who was Managing Director of the Trustees, Executors and Securities Corporation of London, England, which had large holdings in the Company.

Other London concerns largely interested in the Company were Glyn, Mills Currie & Company, and Barling Brothers, well known bankers.

My own connection with the Company dates back to 1889, but as I was not quite certain of my dates, I had a chat with Mr. Galt yesterday and I think the above information is correct.

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APPENDIX "C"

A brief account of the Legal formation or organization of the Alberta Irrigation Company in the Dominion Parliament.
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The Alberta Irrigation Company was incorporated and assented to April 1st, 1893, "56 Victoria, Chapter 69". Some of the Clauses of the Act are as follows:

I. The Honorable Sir Alexander T. Galt, Elliott T. Galt, Charles A. Magrath, Isaac D. Haines, Alexander Ferguson, and Donald W. Davis, together with such persons as become shareholders in the Company hereby incorporated are hereby created a body Corporate under the name of "The Alberta Irrigation Company."

II. The Head Office of the Company shall be in the town of Lethbridge.

The Capital Stock of the Company \$400,000.00
Shares \$100. each.

The Company may for the purposes of irrigation of land and the supply of water power, excavate, construct, maintain, and operate canals or ditches in that portion of the District of Alberta lying south of the Fiftieth Parallel of latitude and acquire land by purchase or otherwise under the powers contained in the "Railway Act" and may draw off, from rivers or other waters, the water necessary.

The Company may issue debentures or other securities, to the extent of \$10,000. per mile of main canal--constructed or under contract to be constructed.

The work to be commenced within three years and finished within ten years after the passing of this Act.

Another Act "59 Victoria, Chapter 44", was assented to April 23rd, 1896, to revive and amend the Act to incorporate the Alberta Irrigation Company.

The Act being Chapter 69 of the Statutes of 1893 is hereby revived and declared to be in force and the times limiting the commencement and completion of the works are extended for three and ten years from the passing of this Act.

Section I. of the said Act is amended by striking out the Hon. Sir A.T.Galt and substituting after Donald W.Davis the words "Wm. D.Barclay of Lethbridge and Charles Ora Card of Cardston."

An Act--62 and 63 Victoria Chapter 93-- respecting the A.I.C. and to change its name to the Canadian Northwest Irrigation Company was assented to July 10th, 1899.

Section II. The Head Office of the Company shall be in the Town of Lethbridge N.W.T., or in the City of London as the directors shall determine by By-Law.

In Bill No.143, respecting the Northwest Irrigation Company, assented to June 25th.1903, the capital stock to be \$2,500,000. The District was south of the 50th Parallel and west of 110° longitude West of Greenwich. The time limit for completion was extended to 1916.

The provisions of the Northwest Irrigation Act 1898 which relate to the right to use and store water, the construction of works and power to take land shall apply when not inconsistent with this Act.

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