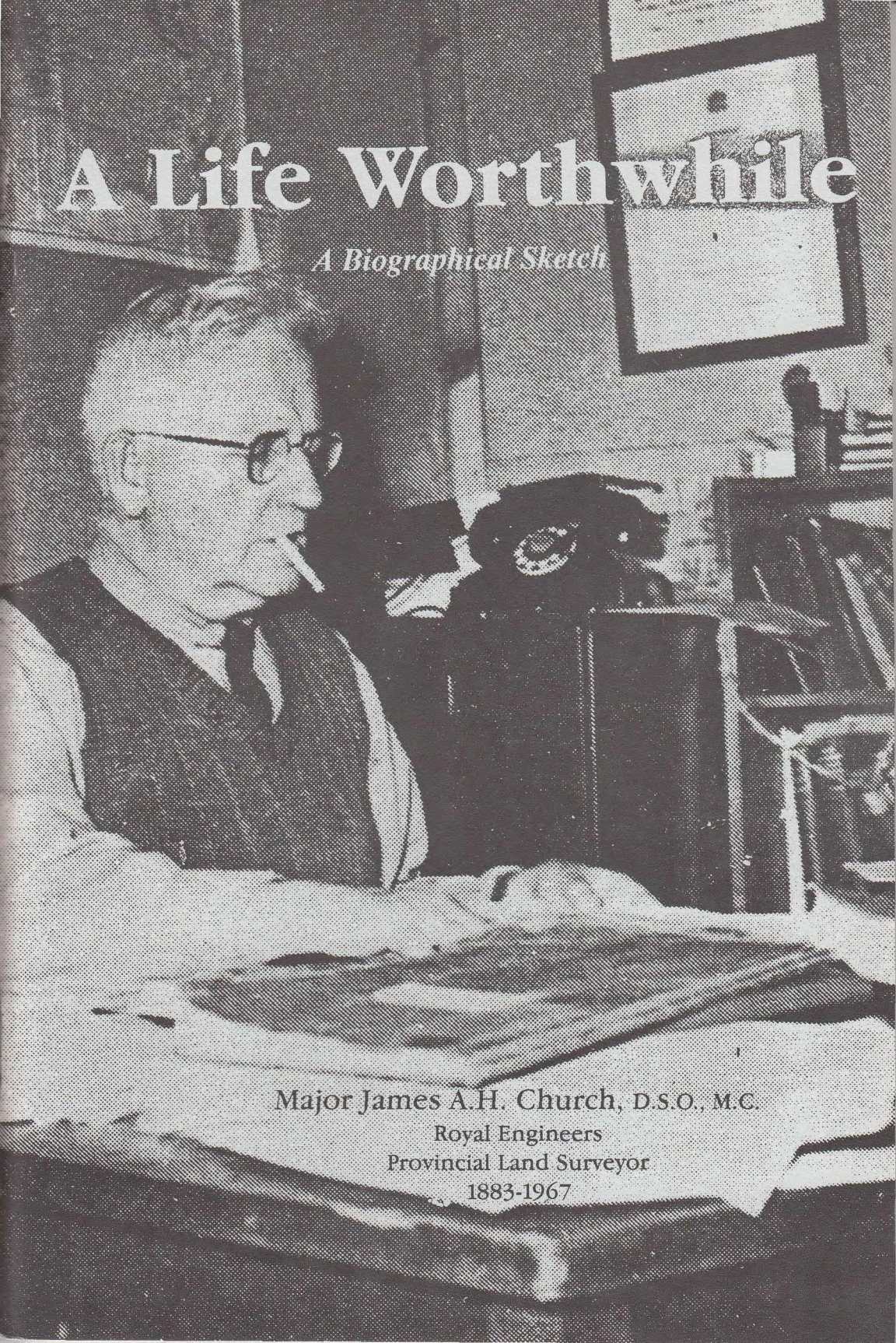
A Life Worthwhile

A Biographical Sketch



Major James A.H. Church, D.S.O., M.C.
Royal Engineers
Provincial Land Surveyor
1883-1967

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by James F. Doig

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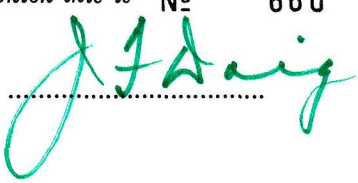

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FOREWORD

Major James A.H. Church had an impact far exceeding the norm in his contribution to Canada, the future of its youth and to the surveying profession. A war hero, a professional surveyor and an educator were but three of his most obvious accomplishments. It was, however, his effect on the lives of all those who met and worked with him, either as professional associates or as students under training, where he made his greatest and most lasting contribution. James Church possessed an intensity, drive and tenacity which when projected through his commanding personality and extraordinary gift of expression, became a powerful force with a profound influence on the students whom he trained and the College of Geographic Sciences which he founded.

The author of this biographical sketch and I both had the privilege of working with Major Church and ultimately succeeding him as Principal. we have endeavoured to maintain his training philosophy and the teaching methods that resulted in the graduates of his College earning a reputation without equal for technical competence and the work ethic. Students learn by doing, often make mistakes, but learn from these errors and with sufficient encouragement and practice develop the confidence and courage to meet the challenges of their chosen profession.

I sincerely hope that "the Major," were he able to see the evolution of his original dream as represented by the College today, would be proud of the legacy which he has left and the degree to which it is a leading force, in this type of training, not only in Nova Scotia but across Canada and beyond.

John F. Wightman
Principal
College of Geographic Sciences

PREFACE

This account of James Church's life, and his development of what would become the most specialized school of applied geography in Canada, has been a long time in the making. Just why, I am not sure. In any case, it has been done more or less by fits and starts, in between other things that have taken my attention.

What appears here is not at all what first was intended. I had initially planned to give an account of both James Church and the development of the N. S. College of Geographic Sciences during its first twenty-five years or so. This seemed a good approach only so long as it remained a general idea. When it came to practicalities, it seemed best to take things one at a time. There would, that way, be no chance that a single tale might become too convoluted. Each topic seemed to warrant individual attention.

Even so, my account of James Church is rather uneven. A tally of pages will show around 13 devoted to his four years' service in World War I, while the remainder of his career is accorded about 24. A good case can be made that the early part ought to be condensed. The primary reason I have not done this is because Church's army service was in cavalry and in tunnelling. Both get passed over rather lightly in general accounts of that period. Of course in this explanation, many of my associates will recognize a familiar proclivity: to decide upon a course of action, and then cast around for reasons to justify it.

I had and have a great admiration for Jimmy Church and what he was able to achieve, as well I ought, for it gave me a good living for almost 30 years. But more than this, I felt some obligation as one who had worked closely with him for five years, to produce an account of his life for others: primarily his former students and his extended family. There must be a number of young men and women now, who would like to know more about that unusual and accomplished individual who was one of their grandfathers. Just how many grandchildren, I am not sure. But in 1962 the count was given in a letter from Church to an old friend in Calgary: "Betty is going strongly and enjoys eight grandchildren enormously — my appreciation of so great a cloud of witnesses being somewhat more restrained except in small doses."

The cover's concept and artwork are testimonials to Walter K. Morrison's unfailingly perceptive sense of the appropriate. Its photo is an enlargement of a portion of that on p. 258 of *Men and Meridians*, Vol. 3, by Don W. Thomson. This three-volume history of surveying and mapping in Canada was published in 1967-69, as a Centennial project of the federal Department of Energy, Mines and Resources.

A title for this sketch of Church's experiences left me at a bit of a loss for some time. Then one evening last spring, the motto of the high school I attended in Saint John, N.B., came to mind: *vita vitalis*. That seemed a good choice.

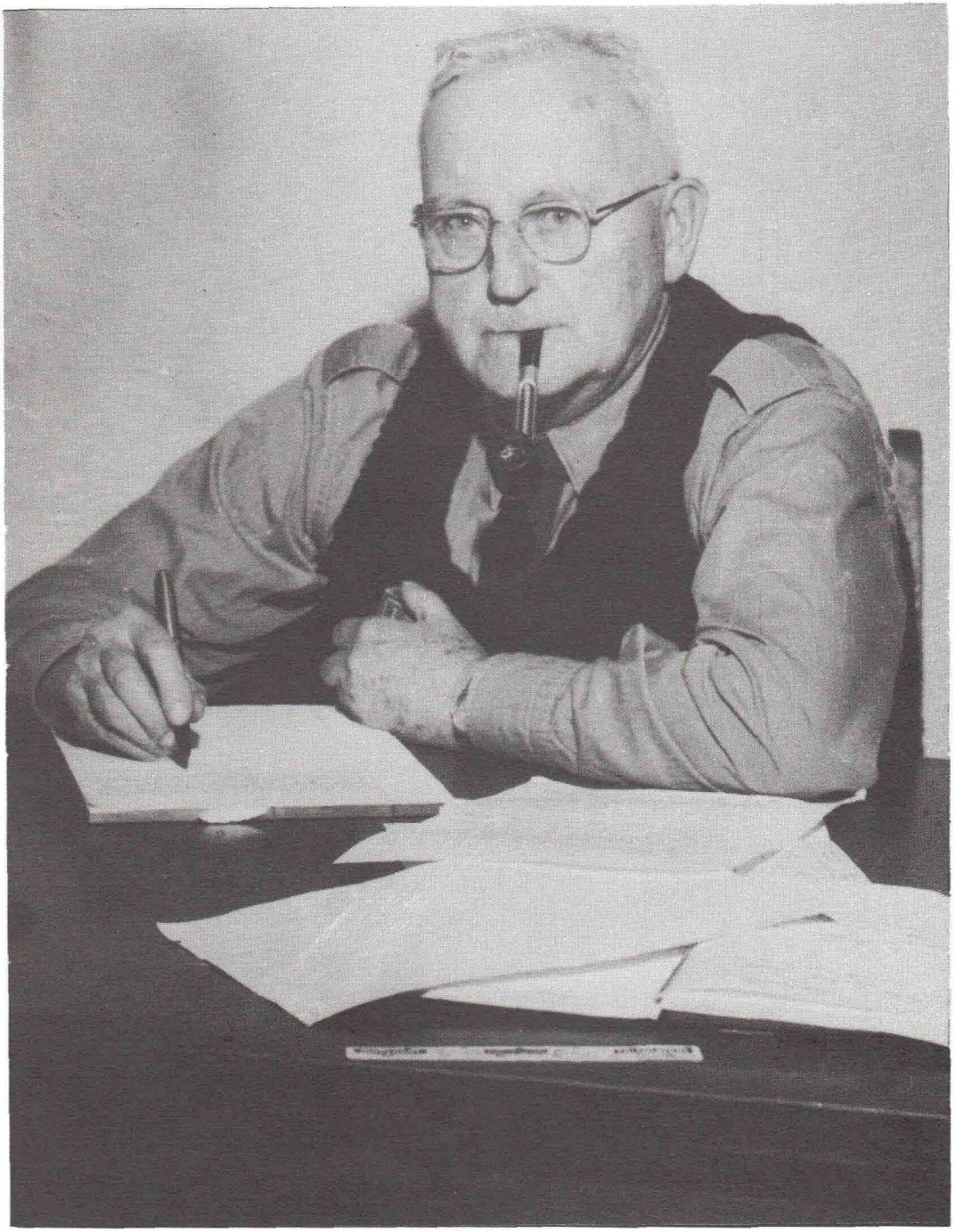
James Church was obviously the right man in the right place on a number of occasions, and rather clearly a man of his times. He would not have been very comfortable in the society we have developed, where the press for personal freedom and individual choice is encouraged so strongly, and where long discussions take place about what people should do, and why, and whether they really should have to, if they don't want to. Church would have regarded many of our principal concerns as utter madness and a great waste of time, serving only to distract people from getting on with work at hand. Others among our priorities, of course, he would have supported enthusiastically and diligently.

Wolfville, N.S.
April 1990

James F. Doig

Work hard, keep up with modern developments, give your client his dollar's worth, and enjoy the better things in life.

James A. H. Church



Early Years

"Being born in India doesn't make you an Indian, any more than being born in a stable makes you a horse," was the response normally forthcoming from James Church when anyone attempted to link the place of his birth with his ancestry. Church came into the world in 1883 in the District of Coorg, where his parents managed — and perhaps owned — a tea plantation. The region is in the south central part of the country, west of Mysore. Crops there continue to be rice, coffee, tea, oranges and spices; the population was and is predominantly Hindu.

When Church was about five years old, his parents died of cholera and he was shipped home to the United Kingdom to be cared for by others in the family. Presumably similar arrangements were made for his younger brother Jack and for his older sisters Eleanor, May and Dorothy. In the event, he was raised by aunts in Scotland where the presbyterian influence was all-pervading, if not still at the peak of its power. His later dislike of "organized religion," as he referred to church activities, may well have stemmed from Scottish religious practices during childhood.

The aunts are reported to have done no cooking on the Sabbath — a pot of cold porridge on the back of the stove had to do. One attended the kirk from ten in the morning until noon, had lunch (such as it might have been) in the churchyard, and then returned to the kirk for the rest of the service, which might go on for another two hours.

Apprentice

Church enrolled in a technical school in Glasgow about the same time as he became an articled pupil with a firm of civil and mining engineers. One is left to suppose this was when he was about nineteen years old and after he had completed his general schooling. He was to remain with the firm for about five years. Presumably his formal studies at the technical school were to last for the same period of time. His daily work, six days a week at ten hours a day, was in the coal mines. On top of this he was three hours a night, five nights a week at study or in class. Christmas Day was a normal working day for him; the one-day holiday allowed at that season was taken by most on New Year's Day.

Prospecting

After graduating from his technical studies and finishing his articles, Church worked for a while as a mining engineer in Scotland. He emigrated to Canada in 1907, having decided to go to the western provinces which were then just beginning to be developed. Coal was being mined there in increasing quantities; new mines were being sought and opened. On his way to new adventures, he stopped off briefly in Montreal to see his brother who was working there in a bank. Church then moved on to Edmonton which he was to make his headquarters for the next seven years.

Employed to search for new coal deposits, he was frequently out on field trips. This, of course, was the day of the pack-horse as far as geological and survey excursions were concerned. Indeed, the pack-horse was to remain a very necessary part of any such activity until after World War II. It so happened that Church was out prospecting when war was declared in August 1914, and he made no delay in returning to base where he enlisted as a trooper (Regimental No. 1964) in the 19th Alberta Dragoons. Doubtless many of his friends and associates did the same. His was a very different world from the one we live in now; war was still seen as an adventure; feelings of patriotism ran high. And there was no time to lose; the whole affair might be over by Christmas.

Enlistment

Given the circumstances of the day, one is left to wonder how Church managed to identify and join one of the few relatively small units which would go to France essentially as it had been organized, and more quickly than most. Perhaps it was pure chance. Times were certainly exciting and rather confused everywhere. Things were possibly a little wilder in the west than elsewhere. The situation in Edmonton was probably much the same as in Calgary.

> Among the first units in Alberta to mobilize as part of the Canadian Expeditionary Force was the 19th Alberta Dragoons (as a Special Service Squadron) .... In Calgary the early enthusiasm was marred by a feud of words between the local detachment of the Legion of Frontiersmen and the representatives of the militia units. The Legion, a semi-military organization, was composed of former soldiers .... Like the military they attended parades, and studied military subjects. On the outbreak of war the Frontiersmen began to recruit, unofficially, in the hope the detachment would be accepted as a mounted unit of the CEF. The militia units, which had recruited officially, were afraid the Frontiersmen would get into battle before them, and they were rather upset about the prospect .... Some of the Frontiersmen from western

> Canada, tired of waiting for action from the Federal government, hired two railway cars and travelled to Ottawa at their own expense. A newspaper man travelled with them. In his report on the group he did not mention where the volunteers originated but it could have been the 300 from Edmonton. He wrote of them 'These Westerners ... look like real fighters ... they wanted to go as cavalrymen. They are clad in khaki puttees, trousers, and shirts with loose knotted western handkerchiefs and broad cowboy hats. They are nearly all "Strathcona Horse" men who saw service in South Africa, and about as hard riding a bunch of men one can imagine .... If they are not accepted ... they threaten to clean out the Militia department.' [*Cunniffe*, pp.91-92]

The Militia department survived whatever confrontation may have occurred; most of the Frontiersmen were enlisted in the Princess Patricia's Canadian Light Infantry or in one of the other infantry battalions at Valcartier. If they wanted to be first into the fight they were going to have to do it on foot.

Regardless of particular circumstances, the Alberta Dragoons, having been ordered on 6 August to mobilize a cavalry squadron, left the province by train in mid-August for Camp Valcartier. The squadron consisted of 270 all ranks; James Church was off to war.

World War I

War would occupy over four years of Church's life. What he experienced can only be inferred, at best, from the more general accounts kept by the units in which he served. How profoundly he was affected by his experiences is an open question. He kept no personal diaries. Diaries are forbidden to all soldiers, though most generals keep them in disobedience of their own and army orders. He left no written accounts. There are no recollected comments of his, save a few. A notice placed in *The Legionary* in 1980, seeking those who had known him, brought no response. The war diaries of the units in which he served say nothing of him beyond the very routine, and not even much of that. This is not unusual, for most war diaries are neither monumental works of prose nor given to great detail as far as individuals are concerned. They are quite matter-of-fact accounts of happenings within the unit, which were common knowledge to its members at the time. After-action reports, copies of operation orders, patrol reports, fire plans, maps, copies of special orders, copies of daily routine orders and standing orders are filed from time to time as appendices to the daily narrative forms. At the end of the month the diary, reviewed and signed by the commanding officer, is sent to the unit's superior headquarters. A diary will tell what the unit was doing, but individuals are rarely mentioned except they be killed, wounded, missing, hospitalized, decorated, or under punishment.

Given these circumstances one can only look to prevailing conditions, unit roles, and those recorded experiences of other individuals which may be regarded as more or less typical, to suggest the situations in which Church found himself. One is left to suppose that he had most experiences appropriate to his particular duties and responsibilities at any given time. It is reasonable to suppose that in 14 months as a trooper in the Alberta Dragoons he performed all the duties and fatigues ordinarily required of a soldier in a cavalry squadron. During his three years as a tunneller he could hardly have missed any of the challenges, dangers and frustrations visited upon these troops as he rose from the rank of Lieutenant to Major. That he was both skillful and courageous goes virtually without saying. Lacking skill, he would not have survived a dangerous business which offered few opportunities to redeem misjudgements or shoddy work. Lacking courage, he could easily have found less trying work to do.

Valcartier

It was the intention that the Canadian Contingent, after concentration and some training, should go to England without delay. Training would continue there on Salisbury Plain.

Few embarkations go smoothly. This one was chaotic, primarily because of last minute decisions: to despatch an additional 6,000 men; to scrap the earlier embarkation plan drawn up by the Director of Supplies and Transport; and to replace that Director and his staff with a newly appointed Director of Embarkation and *his* staff.

> Much space was unnecessarily wasted when guns and limbers were shipped without first removing their wheels .... Mounted units were dismayed to find that in many cases they were separated from their mounts. [*Nicholson*, p. 30]

The process begun on 23 September was completed on 1 October. At nightfall the ships moved from Quebec City down the St. Lawrence to Gaspé Bay to meet their Royal Navy escorts. Sam Hughes turned up to send them off in proper style. "While the convoy was still at anchor ... the Minister of Militia passed through the lines of the waiting transports in a launch distributing to the troops bundles of his 900-word valedictory."

The twelve-day crossing was uneventful. And judging from a sample menu, at Annex "A", the food was good. The first transports entered Plymouth Sound on 14 October. Disembarkation was even more confused than embarkation had been. The last unit came ashore on 24 October, ten days after the first one. "In general it was found best to ship the great bulk of miscellaneous material by trainloads to be sorted out at railway stations near camp."

Salisbury Plain

The ninety square miles of training camp on Salisbury Plain lies just north of Stonehenge. Its broad rolling pasture land was to be the home of 1 Canadian Infantry Division for the next four months. British engineers had been at work to get all in readiness. Tent and kitchen facilities had been put up by British and New Zealand work parties, the latter having been enlisted in the United Kingdom. Everything was in order. An early report from the Canadian advance party said "the camp sites are beautifully situated and the turf is excellent." The English countryside was lovely after that long warm summer of 1914. But before the last Canadian unit had reached Salisbury Plain, it had begun to rain.

On 21 October there was a quarter-inch. The next five days brought a full inch. A period of abnormally heavy rainfall was just beginning. It was to rain for 89 out of 123 days. Between mid-October and mid-February there would be nearly 24 inches — almost double the average of the previous 32 years. High winds consistently damaged and flattened tents. Temperatures were abnormally low. A layer of chalk just below the turf held rainwater at the surface. Wherever men marched or wagons were driven, turf became quagmire. A program of hut construction had begun in October. Eventually all but 1st Infantry Brigade would be under some sort of cover for at least part of the winter. Church's unit got its turn as a delayed New Year's present. On 4 January they received orders to move into Bulford Barracks.

> Of greater significance to the mounted units than their own move into billets was the fact that at the same time their horses were put under cover and on dry standings. During November and December the condition of the animals had deteriorated seriously through their being forced to stand outside in mud to their hocks, their rain-soaked blankets providing little protection from the elements. [*Nicholson*, p. 36]

The general health of the Canadians in these deplorable conditions was remarkably good. So was their morale. Their circumstances, however, gave so much concern that the Australian contingent, originally scheduled to come to England that autumn, was diverted on arrival at Suez to training grounds in Egypt.

Along with the Salisbury weather the Canadians had to contend with deficiencies in supplies and equipment. They had to begin tactical training as well. The 19th Alberta Dragoons (Special Service Squadron) was the divisional cavalry for 1 Canadian Infantry Division. That is, the squadron provided the eyes and ears of the divisional commander. Land warfare was still being waged in only two dimensions. For the mobile operations which

were envisaged in 1914, a cavalry squadron would provide a screen for the main body of the division. Mounted troops could find and hold an enemy force for a limited time, or they could deny enemy cavalry the information the enemy would be seeking about the location and strength of our own infantry.

On 25 January 1915 the Dragoons acted as skeleton enemy for 3rd Infantry Brigade. The mounted troops would take up a position, bring fire upon the approaching brigade, and thus force the leading infantry battalion to halt, reconnoitre and deploy from a marching column into attack formation. The troopers would then quickly mount up, fall back, occupy new positions, wait, and then force the infantry to do it all over again after they had regrouped and moved forward once more. It was good practice for both. But they were not to know then that there would be little movement of the trench lines in France until more than three years had passed.

France

A move to the front was imminent. On 8 February there was a muster parade for all ranks in the morning and the rest of the day was spent readying wagons and stores. The announcement of unrestricted submarine attacks around the British Isles ruled out the regular route from Southampton to LeHavre. Instead, St. Nazaire was to be the port of disembarkation. It was reached after a two-day journey, as far as the Dragoons were concerned. Other units of 1st Division were at sea five days, encountered a brisk gale, and experienced much seasickness.

A five-hundred mile journey by troop train in French army style, using those famous freight cars designed for "*40 hommes ou 8 chevaux*," brought the Canadians to Hazebrouck, near the Belgian frontier. This was the location of HQ Second British Army, and about 20 miles behind the front line.

Church would be with the Dragoons until the coming October. During this time he (and his squadron) would be occupied for the most part with duties rather far removed from those planned earlier for divisional cavalry. Initially, however, everything seemed to be normal. Regular training in mounted and dismounted duties began on 19 February and would continue until 9 March. But next day, and for the ensuing three days in the battle of Neuve Chapelle, the Canadians were in rear of the British on the left, positioned so that if a breakthrough developed, they would be ready to advance. The squadron was thus held poised during the engagement to exploit a break in the German line which never came.

Near the end of March all members of the Dragoons spent a day in the front line infantry trenches of the 8th Battalion. Other training continued in regular fashion. Map reading, a small advance guard exercise, and sword

drill are mentioned specifically in the war diary; the latter was the cavalry equivalent of infantry bayonet practice.

Beginning the fourth week of April 1 Canadian Infantry Division was heavily engaged at St. Julien where the Germans launched the first gas attack. Their chlorine cylinders were opened, and their artillery barrage began on the afternoon of the 22nd. The war diary of the Dragoons records:

> At 5 pm a violent cannonading broke out from the direction of front N of YPRES, and French soldiers began straggling past billets. At 7 pm squadron saddled up and packed 1st line transport, pulling away from billets at 7.30 and proceeding to road E of Divisional Headquarters, halted.

The Dragoons were set to reconnoitring during the confusion of the early stages of the battle. On 23 April, for example, they searched for the junction of the Canadian and the French trench lines. Then the squadron was detailed to control traffic along roads leading to the front; among other things this meant they had to collect stragglers and see that they got back to their units. The squadron was also required to provide orderlies to Divisional HQ; presumably these were mounted troopers used to carry messages to the HQs of the infantry brigades.

On 3 May the Canadians went into reserve, but on 19 May the 1st Division was again committed to battle and would continue in the line until the engagement finished at the end of that month. The engagement was a frustrating affair of infantry assaults which made no real headway. As far as the Dragoons were concerned it was regular training and more or less ordinary routine. Quite some time was spent looking for a missing baggage wagon and a farrier-sergeant was court-martialled. (Whether the two incidents were related, the war diary does not say.) On 29 May over half the squadron was detailed as a working party. Their job was to tidy things up a bit within the infantry brigade areas by burying the dead and gathering up discarded arms and equipment.

Digging In

From late June until mid-September "a strange tranquility persisted across the Canadian front," according to the Official History. Indeed, aside from some additional refinements put into trench raiding in November, the Canadians were not engaged in anything but local actions for the rest of the year. There was, apparently, quite a bit of live and let live. The squadron war diary for 2 September notes:

> On the right ... our lines are only 40 yards from the Boches. Our infantry have become too familiar with the Germans — talking and visiting back and forth. So there is a Corps Order out prohibiting it under penalty of Court-Martial.

Battle or no, there was a great deal of entrenching to be done. This involved not only improving and strengthening front line trenches, but digging communication trenches, developing observation posts, and constructing a strong defensive zone immediately in rear of the forward positions.

On 5 June a sergeant and two men were detailed as a reconnaissance party to investigate enemy wire in front of 2nd Infantry Brigade, where the lines were only 50 yards apart. That particular night the German use of star shells, and a local attack close at hand, disrupted the operation though an enemy sniper post was located.

James Church was recorded on 13 June as "detained in Field Ambulance." The war diary notes his reappearance in the unit "from hospital" a month later on 14 July, but gives no other information. The divisional field ambulance provided medical services to those units which were not large enough to have their own medical officer. Church presumably went on sick parade the morning of the 13th with an ailment which resulted in him being sent back to a field hospital. It may have been an attack of appendicitis. He later was to undergo surgery for the removal of his appendix — an affair then not as routine as it later became.

Within a few days of his return to duty he found himself a member of a party sent out to establish an observation post. The group consisted of a sergeant, a lance-corporal, four troopers from the mounted squadron and three privates from the cyclist company. One Captain Williams-Taylor ADC is noted as being in command of the group. It is a fair inference, from the size of the party and the fact that the officer was an aide-de-camp, that the observation post was for the divisional commander, Major-General Alderson, and his staff. Doubtless the general had wanted one, the captain found a suitable spot, shooed the occupants off the premises, arranged a working party from the Dragoons, and would show the sergeant what was wanted (if indeed the sergeant did not already know). The sergeant would set things up under the immediate control of the corporal, and the soldiers would do the work.

The squadron found itself obliged to furnish working parties of considerable size on a regular basis (58 men, for example, out of an establishment strength of 196) until mid-October. Then it was remarked that "the squadron will not be called on for any working parties for some time as it is necessary to devote a great deal of time to training the new men we have had sent out as reinforcements." This arrangement lasted just about

a month, at which time the Dragoons found their attentions devoted to entrenching at Hill 63 and working at the Divisional Bath Unit.

But why the need for reinforcements on any significant scale? Injuries, sickness, wounds, soldiers killed in action, taken prisoner, missing, and accidental deaths are all part of normal military wastage — that callous though not misdescriptive term used to describe human losses. The squadron had not seen action as a unit, and there had been only two accidental deaths: during riding exercises, two sergeants had collided. However, there were other circumstances peculiar to the time and place.

In mid-September 1915 the 1st Canadian Infantry Division was joined in the line by the 2nd. Together they formed the Canadian Corps. General Alderson took command of the Corps, and with him the orderlies the Alberta Dragoons had furnished while he was divisional commander. Major-General Arthur Currie, the new commander, looked to the Dragoons to supply him with a new set of orderlies so the HQ could continue to function effectively.

But the largest gap was created by those who left the squadron to be commissioned. During the period from mid-March to mid-August between 30 and 40 men had gone as officers to other units. The heavy infantry casualties of spring and summer had forced the British Army, reluctantly, to commission many who otherwise would not have been considered at all suitable. One candidate went to the Royal Marines, one to the Royal Field Artillery and one to the Indian Army. On 14 June nineteen soldiers left the unit for infantry battalions. On 17 July four more left for British battalions and three went to Canadian battalions. The number going to British units reflected the high proportion of those in the Canadian Army early in World War I who had been born in the United Kingdom.

While a rigid class structure did not apply in the Canadian Army, there had been no attempt to identify and train potential officers. Enlistment practices in both Britain and Canada were as wasteful as Canada's mobilization had been confused. One of Britain's most talented physicists died in Gallipoli in 1915 as a private soldier in an infantry battalion.

Tunnelling

Underground warfare began in 1915 when the battle lines had solidified from Switzerland to the Belgian coast. The Germans started it off. The British and French quickly followed. Before very long enormous efforts by way of men, equipment and supplies were being devoted to the struggle underground. Continuing British efforts reached their peak in the formation of 25 tunnelling companies, to which would be added three Canadian, three Australian and one New Zealand companies.

A tunnelling company with its regular establishment of Royal Engineers and its permanently attached infantry — the latter, a force of unskilled labour — could reach 1,000 all ranks:

> A company ... comprised four sections, and a headquarters staff of cook, blacksmith, drivers, clerks, etc. Each section comprised a captain, a lieutenant, two second lieutenants, 42 tunnellers, or skilled miners, who were the highest paid mechanics in the army, and 42 tunnellers' mates, who were mostly miners, but not necessarily so skilled. The whole was commanded by a major. [*Reynolds*, p. 462]

Tunnelling companies were Army Troops. That is to say while they worked at the front with the infantry battalions, brigades and divisions which held the line on the surface, they took their directions and orders from the Army HQ which controlled the sector of the front in which they were located. Tunnelling companies were not under the direct orders of the military formations with which they were closely associated. Throughout the war, corps and divisions were moved in and out of the line from time to time for a variety of reasons. The tunnelling companies were static units. Church's company, for example, was located in Béthune from January 1916 until April 1918.

251 Tunnelling Company RE

James Church's company was formed in October 1915 at Rouen Base Depot. It moved almost at once into the line near La Bassée. Since its war diary did not commence until January 1916, one is left to suppose that the company was made up of miners freshly enlisted in the United Kingdom for that purpose, and given some basic military training there. They would then have been sent across the Channel to join the men with mining experience who had been drawn from units already in France.

The war diary of the Alberta Dragoons makes no mention of Church's departure [*Dept National Defence*]. British Army records suggest he was appointed 2nd Lieutenant, Royal Engineers on 26 October 1915, presumably on arrival at 251 Company or a day or so beforehand, and promoted to Lieutenant shortly thereafter [*Ministry of Defence*]. His new unit brought him into the line about 25 miles south and west of Ypres, the scene of the gas attack against the Canadians that spring. The company would be under the control of First Army until the last few months of the war.

Chalk

Through its assignment to the area of La Bassée, 251 Company was to become a chalk-mining unit, as opposed to a company which found itself working in clay.

> Practically all the mining carried on to the south of Armentières was in chalk, and a different method of work was consequently necessary. In the clay area, secrecy and the driving of galleries without detection by the enemy were the governing factors, but in the chalk area, where the pick had to be used, these results were unobtainable, and the general plan was to drive a number of galleries, trusting that some of them would get through. The noise made in driving certain of these would often confuse the enemy as to the true location of others. After a 'blow,' however, whether by the enemy or ourselves, galleries would often be driven in again quickly before the enemy had a chance to get back to the same area himself. In this case, even in clay areas, no attempt would be made at secrecy .... Normally, in the chalk, to keep the sound of the work from the enemy was impossible, and not attempted. The old 'dodge' of working at a spare face, until the actual moment of 'springing' a mine, was often resorted to. Mechanical picks were also used at times. [*Davis*, p. 475]

The extent of underground operations as a whole is illustrated by three aspects:

> In 1916, when mine warfare had reached its height on the Western Front, some thirty of the eighty miles of front held by the British Expeditionary Force were protected by underground galleries, in several instances at more than one level. In some sectors, notably south of La Bassée, it was possible to walk along a continuous underground gallery in front of the British trenches for several miles.
>
> During 1916 nearly 1,500 mines were fired by both sides on the British-German front, the majority not as part of any major or local surface attack, but in the process of more or less continuous underground warfare.
>
> By the middle of 1916 the British had a force of approximately 25,000 men actively engaged in mining. [*History*, p. 462]

An outstanding characteristic of 251 Company was its stationary nature. For well over two years it never moved from billets at Béthune. This was

greatly different from the shifts and moves made by the British corps and divisions which held the line. They went into rest, or into reserve, or were switched to another sector, and often put under control of a new headquarters, as a normal matter of course. Being static had its own special reward: the company was able to operate garden plots. Thus vegetables could be produced and pigs could be fattened. Both activities enabled the monotonous regular rations to be supplemented with pork and fresh produce.

Canteen profits were used to provide breakfast porridge. Concert parties helped keep up morale. Sports meets made for competitions within and between units. Sales of savings bonds and certificates were tallied according to sections within the company and worked out on a per capita basis.

A number of tasks fell regularly to the company beyond its principal job of tunnelling. There was new equipment, and new methods of using it, to be tested. The construction of dugouts and trenches had to be planned and supervised through the use of infantry work parties. Periodically, tunnellers participated in infantry trench raids, their role being to investigate enemy tunnelling works and to destroy the pit heads.

On 1 January 1917 Church received the Military Cross. This decoration was awarded to warrant officers, lieutenants and captains for gallantry under fire or for repeated displays of courage and good leadership in difficult situations.

During the years that 251 Company was at Béthune, despite great efforts and enormous casualties, the Allies were unable to break through the German lines. On the other hand, once the Germans went over from defence to offense, they smashed the British Fifth Army lines, and came near to dividing the French and British forces. In 1918 they almost managed to pin the British armies in France against the Channel coast, as they actually succeeded in doing 22 years later.

Spring 1918

The German offensive hit Fifth Army on 21 March 1918. The attack came as no great surprise to either troops or commanders. What did surprise was the skill of the German infantry in exploiting weak spots and bypassing strong points. The great difficulties in which Fifth Army found itself were seen by others as distinct possibilities for themselves. Certainly 251 Company was aware of the problem. On 29 March the officer commanding inspected half the company paraded in "fighting order," that is: rifle, bayonet, steel helmet, gas mask, boots, puttees, web equipment and haversack. The next day he did the same with the other half of the unit. When a

company of engineers, with more than enough ordinary work to do, takes time to parade in fighting order, one can be certain that circumstances are very unusual. Earlier, on 8 February, the officer commanding had paid a special visit to the "locality allotted to the company in case of serious enemy attack."

On 9 April it came. The Germans brought the main weight of their drive against 2 Portuguese Infantry Division, the weakest spot in the First Army line. The British 55 Infantry Division, from Lancashire, and 251 Tunnelling Company had been working closely with the Portuguese. Both were determined not to give way. This 24-hour period was probably the most dangerous for the company, as a whole, as any period during the whole war. Certainly it posed a series of major problems for Captain James Church who had assumed command of the Company just four days before.

The day began normally. The relief shift of miners left about 4:00 AM to go forward to the Givenchy works. At 4:15 the company area came under shell fire as enemy artillery searched out road junctions and gun positions. The company "stood to arms" at 4:45. An orderly was despatched to the Signals Office in Béthune to bring back any messages directed to the unit from superior HQ. From another source word came that the relief shift was unable to get forward. Church sent an experienced captain to find and take charge of them. Telephone lines were out and no messages of any kind came either from Corps HQ or from 55 Infantry Division. The latter's reserve brigade was trying to plug the gap left by the Portuguese infantry.

The shell fire continued. Church decided to move.

> Selecting the most essential stores from the accumulation of years, they were loaded speedily into lorries and sent off before roads through Béthune, already being shelled with incendiary and high explosive shells, should be blocked by masonry fallen from the homes or by shell craters. [*Grieve*, p. 280]

Word of some kind eventually arrived from 55 Division. At 2:30 PM all infantry attached from 164 Brigade were returned to them, plus two officers and 53 other ranks, stragglers from 165 Brigade. And all the while there were picquets to be posted and maintained at points where roads had been prepared for demolition.

At 5:40 PM six officers, 30 NCOs and 149 men were dispatched to man a rear defence line. This was, in effect, the whole company since two shifts of some 40 men each were elsewhere, and others were on picquet duty. Church got up to visit his engineers turned infantry about 7:00 PM. He looked around and then left them with instructions as to what was to be

done to improve the position. By this time the relief shift, which had been isolated during the morning and afternoon, had been brought back. Two hours later Church sent their escorting officer forward once more. He was to get to Givenchy and take charge of the shift from the night before which had not been relieved. In the event, they returned nine days later having spent the intervening time underground while the battle went on overhead.

Though the Portuguese Division had fallen back, their Mining Company had not. It had been trained on-the-job and was being supervised by 251 Company; doubtless that was why it was still on hand. The Portuguese miners had been set to digging new trenches. About an hour before midnight Church was back to inspect a detachment of the company which was attached to 166 Infantry Brigade. This detachment was forward of the second defense line being manned by the main body of the company. As things turned out, 251 Company did not have to fight as infantry; the reconstructed main line of defence held the German attack.

After the spring battles, Church's company received two commendations. The one came directly :

> *Following from Field Marshal Commanding-in-Chief. Please convey to Captain Church and to all ranks of the 251st Tunnelling Company my congratulations on their very gallant behaviour.*

The other came a little later as a copy of a letter sent to I Corps from Major-General H.S. Jeudwine, Commanding 55 Division:

> *As the 251st Tunnelling Company has now I understand handed over the Givenchy system to the 3rd Australian Tunnelling Company may I be allowed to express the appreciation of my Division for all the good and gallant work which Major Church and his Company have done for us since we have been associated in the defence of Givenchy. We have never called on them in vain, and often they have anticipated our needs. We have valued them equally as comrades whether they were using the pick or the rifle. Major Church himself has been especially helpful.*

Church had been promoted on 1 June.

Finish

The French and British armies were on the defensive until shortly after the end of July. On 8 August the Canadian Corps (now four divisions strong), with an attack at Arras, led a general offensive. From that time until the

armistice the role of 251 Company changed dramatically. There were no more tunnels to be dug, no more dug-outs to be constructed. Instead there were roads to be repaired, mines to be lifted, unfired demolition charges to be removed, and booby traps to be searched out and disarmed.The war diary entry of 9 October summarized what had been done the previous week:

> Two road diversions round craters put in, craters filled in, three small bridges rebuilt, one bridge across culvert, 27 foot span commenced, roads and ditches repaired for 5,000 yards. An area of 18 square miles has been searched for traps and unexploded demolitions, 42,393 lbs of explosive removed, and all roads examined, over 800 detached buildings and dug-outs have been examined besides four villages and one half the town of Fournes-en-Weppes.

On 20 October Major Church is recorded as having "inspected and removed mine from convent in Rue Vanderagen, Harbourdin."

The diary entry for 11 November makes no mention of the armistice. The work of searching for booby traps was still going on, and would continue for at least another two days.

Early in December the process of demobilization began. Coal miners had priority. Seventy-five of them were struck off strength on the 11th. At the end of the month 251 Company had 18 officers and 187 other ranks. A total of 125 men had been demobilized. On 23 December Church was awarded a Mention in Despatches. Then the *London Gazette*, dated 1 January 1919, carried the award of the Distinguished Service Order to Captain (Acting Major) J.A.H. Church MC, 251st Tunnelling Company RE.

Church had been a good military engineer and a good commander of his company. The unit's record of accomplishments is plain and effective testimony to this. So was the approbation of his superiors. He would not ask anyone to do what he was not prepared to do himself. He was knowledgeable and skillful at his trade, else he would not have survived as a junior officer. He could make abundantly clear to any group what was to be done, and how. If reproofs were warranted he could deliver them in vivid, descriptive, forceful and imaginative language. He was a good manager of men.

His men doubtless quickly learned that he would defend them publicly as vigorously as he might chastise them in private. That richness of speech which made him an object of wonder when aroused, singled him out, as well, to conduct funeral services in the field for those who had fallen.

At one point during the war, Church had quit smoking. For several days his company endured the results of his discomfort, which had heightened a sharpness of tongue and quickness of temper which really didn't need any such honing. After some consultations, two junior officers were delegated to present their commanding officer with a new pipe, a new pouch of tobacco, and a formal request from the whole unit to revert to his former ways.

One of the best marks of the man is how he handled an incipient mutiny. Coming above ground on completing a shift, he found the incoming sappers unwilling to go below. They were afraid the enemy was waiting to explode a mine under them, once they got to work. Church assured them there was no danger, but this had no effect. The men were adamant. Church then told them that while he was too tired to go back and work another shift himself, he would go down with them and sleep at the tunnel face while they worked, and they did.

Demobilization

Church returned to Canada presumably in the spring of 1919. For all of the hazards attendant upon the life of a tunneller, he had suffered only the one injury — a badly twisted knee — when bowled over by a shellburst. He had reported to the Casualty Clearing Centre for treatment, and had returned to duty shortly thereafter. Records of this were apparently very sketchy, were not made at all, or had been lost. His subsequent claims for pension brought no results until 1962. One suspects he persisted in this claim more on principle than anything else; he was not a person to be easily dissuaded, by official refusals, from a course of action he had set his mind upon.

Church re-established himself in Edmonton, as a mining engineer and consultant, with his office in the Tegler Building. He was Examiner in Mining for the Association of Professional Engineers of Alberta, and was a certificated Collier Manager in Great Britain, Alberta and British Columbia. Edmonton would be his headquarters and eventually his home for the next ten years or so.

Marriage

Beatrice Maude Pym arrived in Edmonton in 1922. Born at Harrow, England, the daughter of an Anglican clergyman, she was one of eight children — two boys and six girls. As a young girl she had lived in Mauritius during a time when her father was Bishop of Bombay. Here her education was attended to by a governess while the brothers were sent to English boarding schools, an arrangement quite customary for English families on foreign service for either church or state.

1960
or
thereabouts

On the death of her mother, Beatrice at age thirteen was sent to England with a sister. Their education continued in London for three or four years at Spain's Hall, a private tutoring establishment which operated as a boarding school of sorts for girls of good family. She did not recall her childhood as a particularly happy time.

Her first trip to Canada had been in 1908 or 1909—a visit to Beamsville, Ontario with a friend who had family there. A subsequent journey in 1912 via New York and the Grand Canyon, brought her to stay for a bit with her brothers, Guy and Ronald, who were ranching a quarter section at Mirror, Alberta.

During the war she served as a nursing sister and physiotherapist, attached to a private hospital in France which was financed by one or more wealthy Americans. She thus had some acquaintance with western Canada, and was well experienced in her profession, when she set up a physiotherapy practice in the Tegler Building. The office locations of the two, coincidental as they were, did not serve as the means of introducing the one to the other. The occasion of their first meeting was at the University of Alberta tennis courts where Beatrice managed to attract James' attention by hitting him in the chest with a hard-driven ball. Having in mind her skill at both badminton and tennis, the drive may or may not have been a wild one.

James Church and Beatrice Pym were married at Fernie, B.C. in 1923. Their honeymoon was spent along the Athabaska River, travelling by means of a 22-foot Hudson Bay canoe. Over the next eight years their three children were born: Alex in June 1924, Peter in August 1925, and Lucy in October 1930.

Nova Scotia

The western provinces, as well as the rest of the country, were generally prosperous in the decade following the World War, but the end of the twenties saw the great depression taking hold throughout the land. A number of mines in Alberta were closed down and no new mines were being opened. Church's talents as a mining engineer were not in great demand at all. The couple assessed their prospects and came to the conclusion that they could either stay in Edmonton until their money ran out, or they could find a small farm through which to secure a modest living. They had both found the Edmonton winters rather severe and the maritime exposure of Nova Scotia, with its milder winter season, held considerable attraction for them. Church is reported to have made a rather exhaustive study of weather records for the province.

Whatever the case, he came to Nova Scotia alone in the spring of 1931 where investigations on the spot led him to Lawrencetown. The Church

family was reunited in August 1931 as the result of a mid-summer move. Accomodation was found in the village, with Mrs. Sadie Rae, until early winter when the Pearson house just east of the Exhibition grounds was rented. The spring of 1932 saw everyone established in new quarters at the corner of the Fitch Road and No. 1 Highway. The bulk of their farm of about 60 acres was in the northeast angle of the two roads; a small piece of meadow lay south of the highway and north of the Dominion Atlantic Railway line; a further parcel lay south of the D.A.R. and fronted on the Annapolis River. Their new home became The Bield (a Scots term for shelter), and it would remain so for James and Beatrice through 35 years.

They kept chickens and some cows, had a garden and small fruits, kept bees and ventured into relatively large-scale raspberry production. From the 1940s to the present the economy has had its ups and downs, but during the 1930s most everything was down, and a long way down at that. Probably only those who experienced the decade as parents with small children to look after, can ever fully appreciate how precarious life was for most. To have survived was a great accomplishment.

On the outbreak of war in 1939 Church, like so many other veterans of the first World War, offered his services — though he would have a considerable wait until his talents could be put to good use. At 56 his age precluded enlistment. But in the autumn of 1942 he was engaged as a civilian instructor with No. 6 Vocational Training School (Canadian Army), Halifax.

The pleasure James and Betty experienced with this appointment was overshadowed by their sorrow in the tragedy which struck the family about that time. On the afternoon of 19 August twelve-year-old Lucy had been playing on the edge of the main wharf at Margaretville; she tripped and fell headlong onto the stony beach below. Taken to Soldiers' Memorial Hospital in Middleton, she died later that evening. She had been in Grade VI at Lawrencetown School and a member of the Lawrencetown troop of Girl Guides.

No. 6 Vocational Training School

A number of vocational schools had been set up within the military districts of Canada. They provided trades training for private soldiers and non-commissioned officers, chiefly from the artillery, engineers, signals and ordnance and in areas such as surveying, motor mechanics, vehicle repair and draughting. Some members of each of the classes were usually young soldiers (under 18 years of age) who were not old enough to be posted to units overseas. During the winter and spring of 1942-43 Church commuted by bus between Halifax and Lawrencetown on weekends. From the summer of 1943 until at least the spring of 1944 he and Beatrice lived on Jubilee Road in Halifax.

No. 6 VTS was located on the grounds of the Techical University of Nova Scotia in the south central part of the city. It functioned there throughout the whole of its existence until disbandment on 31 Oct 45. In such circumstances there would be plenty of opportunity for practical projects such as levelling, and traversing for building locations (the traditional survey of a portion of the campus, so familiar to generations of engineering students). But there was very little scope for observations on long lines or for more open topographic practice. There were times, however, when classes would go to Camp Aldershot near Kentville. In May 1944 the unit war diary reported "the Surveyors (Topo) Class, Mr. J.H. Church Instructor to A-14 CITC owing to unsuitability of ground in vicinity of school, greater facilities for survey operations at Aldershot."

It was probably his work at No. 6 VTS that introduced Church to the military computation forms which he later carried over to and continued to use at Lawrencetown. Those were the days (and they remained that way in small establishments until the mid-1960s) when most survey computations were done with logarithms. These eight- or ten-digit numbers had to be looked up in tables, interpolated for fractional parts, and then put down on paper. Opportunities for mistakes abounded, so the military calculation forms had been carefully developed to provide standard methods of handling particular problems. The forms incorporated independent checks (wherever feasible) on the validity both of one's arithmetic and one's field observations.

Judging from a 1943 photo there were about 18 soldiers in a survey class for whom Church and an assistant were instructors. For the first two years his assistant was Spr. J.J. Kisway who had spent some time in Quebec as an engineering assistant and had enlisted in the Royal Canadian Engineers in 1942. Kisway was discharged from the Army in 1944, whereupon he articled to an Ontario Land Surveyor in St. Catherines. He returned to Nova Scotia in 1947 to work again with Church for a year. During this second stint in the province Kisway obtained his commissions as a provincial land surveyor in both Nova Scotia and Prince Edward Island. He subsequently spent some time in the MacKenzie River valley, and then returned to work in Hamilton where he received his commission as an Ontario Land Surveyor in 1950. He conducted a private survey practice in that city until shortly before his death at 51 in 1968. Kisway was the "Irregardless Joe," of whom members of his early civilian survey classes would hear Church speak often and fondly.

Transition

In the early spring of 1945 it was evident that the war in Europe would soon be at an end. At the same time it was clear that Canada's contribution to the Pacific war would be on a scale much reduced from current military

commitments. Thus it would not be long before No. 6 Vocational Training School would pass out of the picture.

Dr. F.H. Sexton, who had been appointed Principal of the Technical University of Nova Scotia on its founding in 1907 and who would remain so until 1947, was also Director of Technical Training for the Maritime Provinces. Sexton was instrumental in establishing a course in land surveying for veterans under the Canadian Vocational Training Program. He had had some exposure to survey training because TUNS had offered short courses in the discipline since 1912 or even earlier. A syllabus of training was drawn up and approved by the three provinces. Church was put in charge of the new venture which came into being on 1 November 1945 as the Provincial Land Survey Course. Brigadier John Lyon, Ottawa, later gave a summary of the national efforts:

> The activities carried on under Canadian Vocational Training, a Dominion-Provincial organization, which is directed by the Dominion Department of Labour. Some years ago the Department of Labour was asked by the Minister of Veterans' Affairs if it would undertake the responsibility for the vocational training of men and women discharged from the armed forces. The Labour Department had, at that time, a large training organization in existence which had been started prior to the war as a youth training project. During the war, the program was altered and became War Emergency Training, under which the Department of Labour trained 124,000 tradesmen for the armed forces and 280,000 workers for industry. It was natural that this organization should be used for the rehabilitation training of veterans.
>
> The training is carried out in co-operation with, and through the provincial governments. There is an arrangement with each province, and the most excellent co-operation has been received from them. In each province there is a regional director who has an office, field and school staff for handling administrative work, field supervision, and instruction in various training centres.
>
> The cost of the rehabilitation training programme is paid entirely by the Dominion Government. The training which is carried out includes full time pre-employment classes, part time classes for veterans who may be employed and wish to have some supplementary instruction, correspondence courses, indentured apprenticeship, pre-matriculation courses and training-on-the-job. [*Church*, 1948]

Demobilization of the armed forces in the summer and autumn of 1945 meant that Church's new venture would have to find other quarters. The Technical University needed the space that hitherto had been used by the vocational classes which had been conducted in temporary wooden buildings constructed on the University grounds. The necessity for a move would naturally raise the broader question: should the class be in the city or in a rural location? There would be good points to be considered on both sides of the matter, but the ultimate decision came down in favour of a rural setting. More room was needed for practical field training than was regularly accessible in an urban environment. As Church recorded later:

> There were two reasons for the transfer: (1) the crowded conditions at the [University] and (2) the area in and about Halifax did not lend itself to effective instruction in field work; there was too much reflection of artificial lighting which prejudiced the taking of stellar observations and it was not found possible in the territory to set up the required bench marks. [*Church*, 1957]

The surveying class was moved to Lawrencetown in the spring of 1946. Its first though temporary location was the Agricultural Building on the Exhibition grounds; subsequently the class took up quarters over Hankinson's Store on Commercial Street in Middleton. Arrangements at this time were such that a student could join the course at any time and stay up to a year. [*Robertson*]

From 1 November 1945 until 31 December 1948 Major Church's survey class was under the direction and control of the provincial Department of Labour. This was a time in Nova Scotia, however, when major changes were being made with respect to vocational education as a whole. Up until 1947 vocational courses had been developed through the Technical University and training had then been given by the Department of Labour. In 1947 vocational training was made the responsibility of the Department of Education. Mr. E.K. Ford, a former inspector of schools and now supervisor of industrial arts, was appointed Director of Vocational Education and became responsible for operating the programs formerly looked after by the Technical Education Branch of the Department of Labour. [*MacDonald*]

This shift of responsibility between two departments of government apparently broke the continuity of the training. There seems to have been an hiatus in the operation of classes between January and September of 1949. Presumably the last class under the former system finished up near the end of 1948 with the new class slated to begin the following September, at the commencement of the regular school year. The new class would operate with a fixed enrolment as opposed to the earlier more flexible mode of entry

and departure. In any case, Church was appointed to the Division of Vocational Education, at a salary of $2100 per year plus cost-of-living bonus, on 1 September 1949. Because of his age he was not eligible to be appointed to the Civil Service or to participate in the provincial superannuation plan. His employment was at the pleasure of the Governor in Council. During Church's time with No. 6 VTS and with the Department of Labour he had had a full-time assistant. Education officials could not countenance such an arrangement under the new regime since the class would be smaller than had been the case previously. It would be 1954 before Church could have a student assistant, whom he might choose from his class, and whose stipend of $50 per month would be paid by the Department.

Major Church's School

Classes started up again in rather modest quarters in the Legion Hall at Lawrencetown where they would remain for the next nine years. Rent, heat, light and janitor service amounted to $40 per month [*Ford*] in an extension which had been put on the rear of the building. This room (about 40' long and perhaps 15' wide) became the location for Church and his class. Total costs then, for a year's operation, were probably not much different than those three years later when the *Public Accounts of Nova Scotia 1951-52* listed the expenditures for the Land Survey School at $3971.83 which amount included the instructor's salary.

Whatever arrangements were made on initial occupancy of the new lodgings, they were likely along the lines of those which prevailed once the extra space had been added to serve as a classroom. At the east end of the room Church had his desk and a couple of bookcases; along the south wall by the windows, mounted on saw-horses and grouped in pairs, were draughting boards for students who sat on wooden draughting stools; the wall opposite the windows held two large blackboards; at the west end near the porch were racks and hangers for transits, tripods, range poles, chains, coats, boots and whatever else was needed from time to time. An oil stove provided heat. Near Church's desk was a table just large enough to hold a typewriter and next to the desk were a couple of wooden chairs to accomodate visitors. These chairs were also used by students when called up to have written assignments gone over, and shortcomings (both those of the assignment and those of the individual) enlarged upon. These oral critiques were always fun for all but the current sufferer, though everyone was aware that his own turn would be coming.

Visitors, prospective students and Church's cigarette ash were always given careful and respectful attention. Seated at his desk with a cigarette centred in his mouth, he would work for considerable periods of time without really smoking but rather just letting the cigarette burn away at its own rate. At least that was how it seemed. He most often wore a sleeveless knitted

sweater over which the ash hung and grew. As the ash got longer, students' attention became the more rivetted upon it. When at last the ash fell on his sweater front he would brush at it with one hand and continue to work unperturbed. Student attention was then re-directed to projects at hand. At the blackboard he often performed in somewhat the same fashion; he would speak from one side of his mouth with a cigarette gripped in the other; the cigarette would burn, and the attention paid his commentary was in inverse ratio to the length of the ash.

The single room served for instructor's office, lecture theatre, student work space, instrument storage, cloakroom, and common-room for students to discuss past and anticipated social events. Thus there was often quite a hub-bub. Periodically Church would tell everyone to quiet down; one of his favourite expressions on such occasions was to liken the place to a parrot's cage: "all s—t and jabber." However, no such injunction for quiet was ever needed when a prospective member of the next year's class turned up on the scene. Church's manner was always short and brusque: there were no promises of high salaries and high living; at some point the enquirer would be told in a variety of colourful expressions that only a "damn fool" or a "blithering idiot" would ever consider surveying as a means to making a living. But that being obviously the case as witnessed by the enquirer's presence, the means were at hand to help such an unfortunate make something of himself. The recipe was that the virtually self-confessed wretch would have to buckle down to some real work for a change.

Other visitors, depending upon the reason for their call, could provide some light relief as well. One afternoon E.K. Ford arrived unannounced, and on stepping into the midst of things offered the opinion that the classroom was more than a little untidy. Church never turned a hair; he promptly declared that the conditions Ford saw were those in which the students would find themselves when they finished the course and went to work; he was just giving them some on-the-job training in preparation. The two of them stared at each other in silence for a moment or two and then mutually found a safer topic to discuss. Both men were of medium height, though very different in appearance and behaviour. Ford was probably ten years Church's junior in age. Church was stout, his voice was resonant, and he had a rough and tumble appearance, while Ford was trim, slightly built and soft-spoken, with the air of an old-fashioned clerk about him. Neither, however, had had much experience in backing off from a good argument and each probably recognized that fact in the other.

Church was certainly an awe-inspiring figure to a boy or young man; probably few, if any at all, had ever met a person quite like him before. His manner, coupled with the fact that he was in complete charge of things — fully lord and master of the classroom — clearly made him a force to be

reckoned with. There were no other classes and no other teachers or instructors to turn to; it manifestly behooved one to do precisely as one was told. Older students — and there were normally at least one or two in each class who were several years beyond the average age — were perhaps not as overwhelmed by his methods as were the younger ones, but they equally perceived that they were in circumstances that brooked no nonsense.

The older students began earlier than the younger ones to appreciate and admire Church's capacity with language. His reproofs could be (and usually were) blunt, earthy and descriptive. On the other hand he would take plain statements of fact and show by precept and example (one of his favourite expressions) how such could be improved and made more arresting through the use of appropriate words and phrases. This sort of approach, he was fond of declaiming, "would lend and air of verisimilitude to an otherwise bald and unconvincing statement." Occasionally he would confide to his class, with a pleased look on his face at having so far escaped the consequences of his own maxim, that anyone over 60 should be buried whether he were dead or not.

His capacity in written work was no less accomplished than his speech. He would write for lengthy periods during which words flowed from his pen without, seemingly, the need for conscious thought. His letters were more circumspect, of course, than comments he might offer in the classroom or in conversation. Nevertheless, the secretaries in the Vocational Education Division always kept a sharp eye out for his correspondence. Memos which contained uncommon turns of phrase were shared around among the ladies before those to whom they were addressed ever saw them. One that got rather wider circulation than usual described a particular piece of equipment as "useless as mammary glands on a boar pig."

Training

Church's training aims with the Vocational Education Division continued to be those which he had established earlier in discussions with Dr. Sexton:

> (1) The development of surveyors well and truly grounded in the basics of their profession in contra-distinction to the journeyman who might become an adept instrumentman but destined to remain such from lack of initiative and the faculty for critical analysis which result from a knowledge of the fundamentals of his craft.
>
> (2) At no time was it expected that we would turn out experts in twelve short months, but we did hope to give the student such training, both theoretical and in the field, as would permit him to learn from his own experience the limits of accuracy possible with the working tools of his profession, viz.: the level, compass and

chain, engineer's transit reading to 1 minute of arc, and also such modifications of the standard of accuracy as might be permissable on any particular type of work.

(3) It was expected that the more thoughtful student so grounded would improve his technique, judgment and dependability, with experience largely proportionate to the class of company in which fortune might place him. [*Church*, 1948]

He maintained these aims during the time he was responsible for the survey and other training programs. His successors did the same, the necessary changes being made to adapt to new equipment and new techniques.

Church laid a heavy emphasis on positional astronomy — the determination of direction, latitude, and approximate longitude from solar and stellar observations. He asserted that "once the student has grasped the principles involved in the transition from plane to spherical trigonometry and aquired the techniques of making solar and stellar observations, his self reliance is enhanced to a remarkable degree." Other instructors found this to be the case too. In fact, the extent to which skills in field astronomy build self confidence, is one of the principal reasons the topic was emphasized in the curriculum rather long after positional astronomy had been superceded by other methods of survey control.

The entrance standards for the course, and the curriculum which Church taught, considerably exceeded the formal requirements of the time for licensing land surveyors in the Atlantic provinces. His students were almost invariably successful with formal examinations set and marked by provincial survey examining boards. The period spent with Church in his class was counted as apprentice time. So on graduation, followed by successful completion of the examinations and usually some further practical experience, his students were able to operate their own private survey practices, and many did just that. Others sought employment in and remained with federal, provincial or municipal government agencies or with established private companies. His graduates were always in demand; they had little difficulty in finding jobs. In a letter to his Deputy Minister dated 5 August 1954, Darrell Mills wrote:

I am aware that Mr. Church is considered by many to be a bit of an individualist, but I consider him to have been and to be a most effective instructor of Land Survey. I base my judgment principally on the record of his students in the examinations set by the Department of Lands and Forests, on the opinions of students and graduates, on the record of employment of the graduates, and on observation.

A class beginning in September and running through until the following August did pose one problem: the graduate was coming into the market just as the autumn field season was beginning to wind down. Consequently in 1951 the commencement date for the next class was shifted to January 1952. The class would then run through until the following December. This cycle held until 1958 when the survey program was lengthened to two years; entry would then be in September of one year with graduation in the spring two years thence, with a summer of practical employment in survey separating the two academic years. The two-year program of study in surveying, developed in 1959 in its essentials, would stand for a little over 20 years as the academic standard for the licensing of land surveyors in Nova Scotia.

The Hall Trusts

It was shortly after the survey course was established in Lawrencetown, one supposes, that Church became aware of the terms of the bequest made by James B. Hall just about 20 years before. There would have been no particular reason why he should have known about it, or why anyone should have told him about it, before then. In essence Hall's will had placed money in trust "to found a Vocational School in Annapolis County." The coincidence of the funds having been set up, and the later appearance of a full-time vocational course as a going concern within the County is startling enough in itself. An added level of the unusual is found in Hall's background. Though aware of and interested in the technical programs developed in Germany and elsewhere during the latter half of the 19th century, he had been for the thirty years prior to his retirement in 1912 a professor at the Provincial Normal School. There he had taught languages, history, geography, psychology and civics at one time or another. None of these were particularly associated with vocational education [*Cousins*], aside from the fact that Hall was living and working in a province which "had, in his day particularly, a profound academic tradition and practically no knowledge of vocational schools." [*Mills*]

At any rate, as Church was wont to say, a wink is as good as a nod, so he began a campaign to convince departmental officials of two things. First was the proposition that there would be a future in the long term for the Land Survey School; second was that the monies in the Hall trusts could properly be placed in support of the School. In the first venture he had encouragement, and confirmation of the future need for surveyors, from federal officials in Ottawa and from members of the survey community within the Maritimes and elsewhere. In the second, the matter of the Hall trusts, he secured the support of E.K. Ford. The advice of the Attorney General was sought on legal points, and Ford offered an assessment of vocational education perceptions as they were at the time Hall's will had been made.

Proposals of this sort always move ahead slowly; late in 1953 the Minister of Education seems to have been convinced that the venture had merit, providing long-term forecasts of enrolment were supportive. The Minister, (who happened also to be Premier) was Henry D. Hicks, Member of the Legislative Assembly for Annapolis County. Hicks had attended school closing exercises on 4 December that year, and had at the time made some references to the future of the school and the possibility of making use of the Hall bequest. In the event, it would be another five years before these possibilities became reality. For Church these years would be difficult ones, since it fell in great measure upon him to gather, collate, and present in organized fashion, the myriad pieces of information and justification which would advance the proposal of a Land Survey School with a real home of its own. All of this effort, of course, was in addition — in his spare time, as it were — to the demands of running a class for almost 50 weeks of the year. His annual holidays fell in December, in between successive classes.

In the early days the School was rarely, if ever, called by its proper name; it had quickly become known as Major Church's School. Church was quite well aware of this and had drawn the situation to the attention of the Director of Vocational Education, pointing out that it was simply one more reason why things should be placed on a more substantial footing.

During the period 1949 to 1958 when the School was a one-man, one-class affair, Church offered what he termed a brush-up course. For a fee of perhaps $10 (the fee for the full year was $50), paid to the Department, an individual could join the class during its last couple of months. During this period a considerable emphasis was placed on the exams which had to be written after graduation to obtain one's commission as a land surveyor. One or two individuals each year usually availed themselves of this option; it was a useful approach for those who had had a good deal of field experience but were, perhaps, a bit short on the techniques of dealing with formal written examinations.

Professional Connections

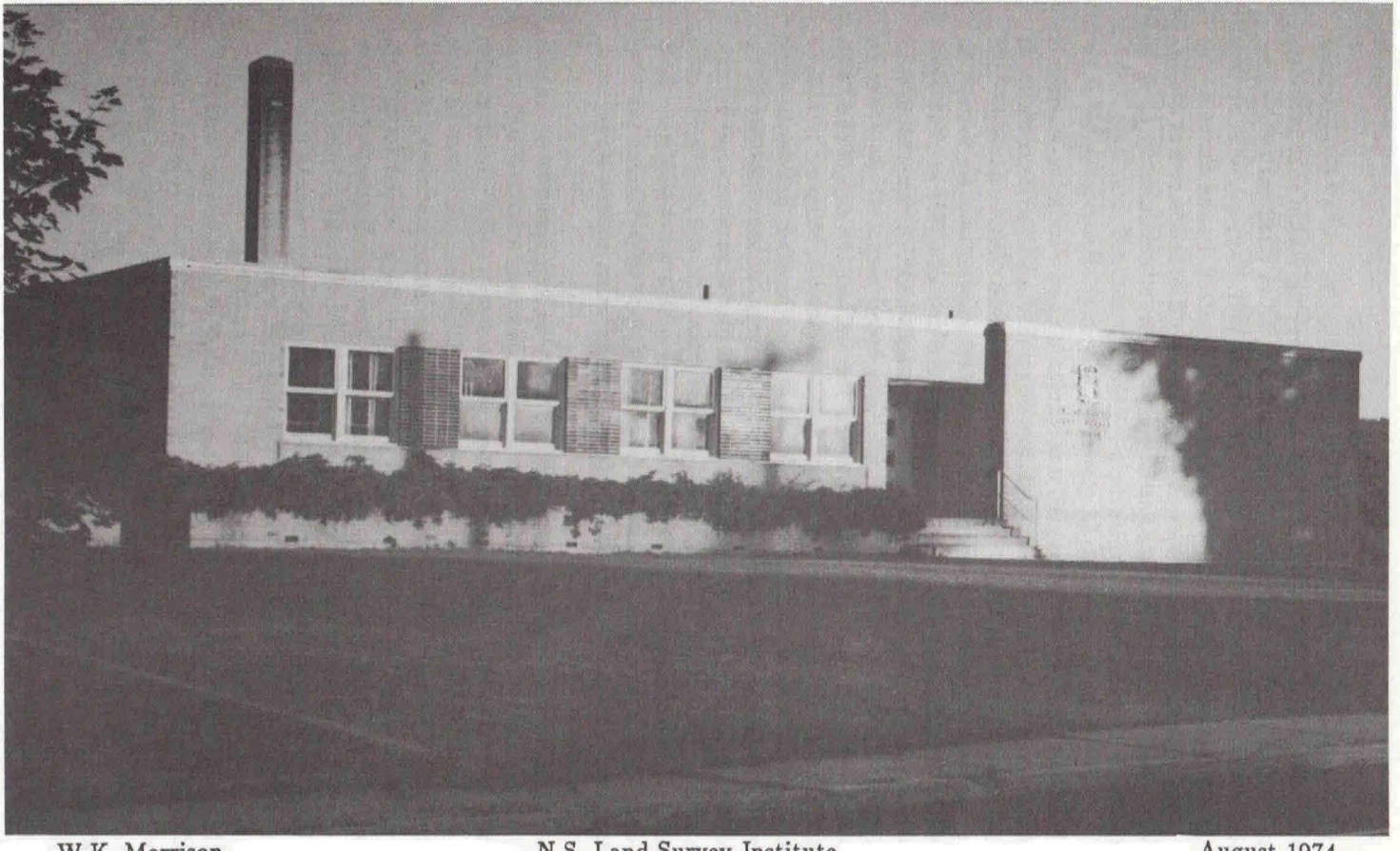
In its early stages the Land Survey School may have appeared to be operating in isolation, particularly because it was small and to some extent off the beaten track. In reality, this was not the case. Church's work with No. 6 VTS in Halifax on the TUNS campus, his subsequent development of a training program for the Maritime Provinces in discussion with Dr. Sexton and others, and his association with the Department of Labour, had put him in touch with experienced surveyors throughout the Maritimes and in Ottawa. Many were individuals who perceived the need for better technical training on the part of those who would become surveyors, and the better organization of those who were already working as surveyors.

Within each of the provinces outside Atlantic Canada, was an incorporated body which regulated the practice of land surveying within that province, and which spoke for the land surveyors there. From a federal perspective there was the Canadian Institute of Surveying and Mapping, with no regulatory powers, but which was materially supported by the Surveys and Mapping Branch of the Government of Canada. The Institute was the national technical home for those with an interest in and commitment to these disciplines.

Therefore to the extent surveying was regulated at all within the Maritimes when Church began to teach, this was done through that department of provincial government which dealt with Crown lands. There was only CISM as a source of technical and professional exchange in matters related to surveying and mapping. Church became a member of CISM in 1942 when he was appointed to No. 6 VTS and this brought him into association with a number of those in Nova Scotia who had broad perspectives. Later he would meet like individuals in other provinces. Near the end of the 1940s a number of land surveyors in Nova Scotia began to promote the idea of a provincial association along the lines of those in other provinces. The result was the Association of N.S. Land Surveyors, which came into being in 1951. Church gave the organizational efforts his full support, and became a staunch member of ANSLS once it got under way. He was later very active in helping to develop legislation which would enable the Association both to regulate land surveying within the province, and to determine the level and range of examinations for the future qualification of land surveyors.

Church was wise enough, obviously, to see that the connections he was making, and would be making in these professional associations, could stand him and his work in good stead. But to get help, one must give it; furnishing effective support to a professional organization can be hard work. Many things need to be done — and not necessarily at times of one's own choosing — while one's regular work has to be attended to as well. In essence, Church's professional memberships and contributions made the School more widely known within the surveying community. And he was able to call knowledgeably upon individuals and groups within that community to confirm the need for a continuing and expanded facility.

Once the survey course had come under the direction of the Vocational Education Division, an advisory committee was appointed. This committee was made up of experienced surveyors who could offer advice on technical matters and who were, in addition, in positions where they normally hired graduates, or could promote their hiring. Initial and subsequent members of the advisory committee were to become Church's vigorous supporters. First appointments were: F.C. Wightman, a consulting engineer from Amherst; V.P. Harrison of the Department of Lands and Forests; and R.E. Dickie, Bowater Mersey Paper Company.



W.K. Morrison N.S. Land Survey Institute August 1974
1958 – 1975

N.S. Land Survey Institute

By early 1957 the essential decisions had been taken. The Land Survey School would soon have its own building and grounds, with room for other programs of instruction as well as for surveying. About $80,000 was available from the Hall capital trust. Construction of a two-storey brick building with 8,000 square feet of floor space would begin in late autumn. For the class then in session this meant a move to temporary quarters. The new building would be located on land donated by Lawrencetown Branch No. 112, Royal Canadian Legion. The Legion hall, a wooden structure, would be demolished; the Legion branch would have space in the new building for their meetings.

W.D. Mills, Assistant Director of Vocational Education, was responsible for coordinating the efforts and interests of the contractor, the Department of Public Works, and the Department of Education. Though a rather modest project from a purely construction point of view, the venture served Mills as a good introduction to some of his future commitments. During his subsequent tenure as Director of Vocational Education, Darrell Mills would be responsible for the construction and development, between 1960 and 1970, of two other technical institutes and twelve vocational schools.

While James Church was relieved of the administrative details pertaining to construction, inevitably he had some involvement as the departmental person on the spot. In addition, he was responsible for developing new programs of instruction and for determining the need for associated equipment. Federal officials of the Surveys and Mapping Branch of the Department of Energy, Mines and Resources were most helpful on both counts. There were also, of course, his regular duties as the instructor of the current class.

Once construction got under way, the survey class was moved to the Agricultural Building on the Exhibition grounds. There the students would stay until the end of July 1958. When time came for the annual Annapolis County Exhibition, the class would have to move again to a room in Lawrencetown School where they would remain until their new quarters were ready for them.

During the autumn of 1957, though he may not have shown it to others, Church was under considerable strain. He had the added responsibility of an expanded training program, and he was not in good health. He had suffered from pernicious anemia for a considerable time and this alone, at 74 years of age, might well have done in a less determined individual.

It had been his normal practice to attend annual meetings of the Canadian Institute of Surveying and Mapping which were held in Ottawa in late January or early February. The coming meeting would be an important

one for there would be much to discuss with a number of officials in the Surveys and Mapping Branch of the federal government. Church took sick on 10 January, and subsequently had an examination by a specialist in Kentville. He must have had some presentiments for he reported one of the doctor's written comments to E.K. Ford and W.D. Mills: "[Church] is apparently working too hard," while adding his own observation, "and that gentlemen is an unqualified understatement." He suggested it was time he had an assistant who could "take over some of the routine work and do all the leg work in the field," saying the only person he would approve was James Doig of Paradise (though nothing of this had ever been discussed with him).

In the event, Church went to Ottawa, attended the CISM meeting, and on the way home called in on his son Peter who had a medical practice in Montreal. This was as far as he got for a time. Peter put him in hospital where he underwent a prostate operation, and had as good a rest afterward as one could have under such circumstances.

On the home front Darrell Mills got in touch with Doig on a Saturday evening. They agreed that he would look after the survey class from Monday morning until Major Church was able to handle things on his own. As it turned out, Church was back at work half-days at some point in April. By this time—looking to an expanded training program in the near future—the decision had been taken to keep Doig on as a survey instructor and assistant to Church.

The survey class moved into the new building on Friday, October 10, 1958. All must have marvelled at the grand new quarters and all, equally, must have wondered how so much space could ever be filled. Later in the season, after some finishing touches to the upper floor, the formal ceremonies took place of accepting the building from the contractor. The Minister of Education, whose task it was to declare the building officially open, was Malcolm Leonard of Digby. Mr. Leonard had grown up in Paradise; his father, R.S. Leonard, had given James Church considerable local information and guidance when he and his family had come to Lawrencetown, nearly 30 years before.

New Programs

When the new quarters were occupied, the survey classes were located in the two large rooms on the ground floor. Church taught the first-year class while Doig would look after the second year of the program. Church's attitude here was quite sound. Since he would have control of the incoming class for their first exposure to survey, students would get what he deemed to be the essentials: discipline, attention to detail, an appreciation of the importance of dependability and good quality work, plus an early morning

start on the job. Whatever happened after that, by way of technical refinements, might well do them some further good, but certainly could do them no harm. The foundation would have been laid.

The role of the Institute now changed. Where before it had been an entity devoted to training surveyors, it now became one geared to training mapmakers. To make a map involves three skills: determining the true size and shape of the area to be mapped; recording the physical features within that area; and drawing the final product to scale. Early surveyors often performed all three tasks, but successive increases in the size of mapping projects and the advent of new technology had changed this. Surveyors now carried out control surveys for size and shape; physical features were identified from aerial photographs using stereoplotters; and the maps themselves were produced through the specialized techniques of cartographic drafting and associated photographic processes.

In the autumn of 1958 Mrs. Frances M. Baltzer was engaged as secretary. A one-year program in photogrammetry was established in 1960 to train stereoplotter operators to remove the effects of tip, tilt and uneven ground surfaces from aerial photos, and then to represent to scale the physical features of that portion of the earth's surface seen in those photos. Capt. Charles Hogg, recently retired from the Army Survey Establishment in Ottawa, a surveyor and photogrammetrist of 30 years' experience, was engaged as the instructor.

In 1961 the establishment of a program in cartography perfected the capacity of the Institute to train technicians for the whole of the mapping task. Cartographic techniques involved hand and mechanical lettering, scribing, and the capacity to meet tolerances of a few thousandths of an inch in order to produce the transparent overlays needed to turn out multi-coloured map sheets. John F. Wightman, Smiths Cove, N.S., a graduate of Acadia University, and a geologist whose field experience had embraced work with the N.S. Research Foundation, was selected as the instructor.

Influence on Students

James Church had a tremendous influence on his students. In many cases he must have been the most powerful factor, beyond the parents, in shaping character. In some instances he may even have been more influential than the parents themselves. He made it quite clear to everyone in a new class that dependability and probity should govern one's actions at all times, and that he would expect these characteristics to be present in everyone as a matter of course. A comment was made a good many years later by a graduate, to the effect that while he had learned quite a lot about surveying from Jimmy Church, he had learned even more about living.

Around 1970, J.B. O'Neill, then executive director of the Canadian Institute of Surveying and Mapping, was guest speaker at graduation exercises. O'Neill had been a topographic surveyor with the federal government for about 20 years since his days as a student with Church. The theme of O'Neill's address was the influence James Church had had on his attitudes and outlook. O'Neill, by his own admission, had come to the class with the view, principally on account of his war service, that the world owed him a living. He told how Church had recognized the symptoms, dealt with the situation, and managed to bring him around to a more rational way of thinking.

O'Neill's address that day was a very personal account of his own experiences, but it held everyone's complete attention. It was quite a common thing, during the years immediately afterward, to hear mention made of that afternoon. Comments came from both those who were there and those who had heard of the occasion by report. While O'Neill had spoken only of himself, it was plain from those later observations that he had spoken, in some measure at least, for a good many others.

Every member of a class, at some time during the year, was an individual guest of the Churches on a Sunday afternoon and for Sunday dinner. This was probably the occasion students first began to suspect that there was a side to Church rather different from that which they saw in the classroom. Mr. and Mrs. Church were very gracious hosts.

Everett A. Green, Supervisor of Technical Institutes with the Department of Education, to whom Church officially reported during his last six years of service, commented both on his business and social associations with him:

> On my third day in the Department, George MacDonald decided we would visit Lawrencetown. It took about three hours to get there and I was disillusioned. I expected to see a large school and was surprised to see such a small one. We found Church at his desk in the corner of the large classroom. I don't remember if he used an office or not. Anyway, George introduced me as the new supervisor. Church looked at me and said, "What are you? Another wheel among the wheels?" I realized at that time that Church would be in charge of the Survey School and I was there to serve him. Having established this position we got along fine.
>
> I think that Church's only interest was surveying and that he was dedicated to producing the best surveyors possible. Although his attitudes toward departmental procedures were not always appreciated by our most dedicated bureaucrats, I recognized that everything he did was in the best interests of the students and the profession.

> On my visits to the school I got the impression that his classroom was the parade square. Students didn't ask for help. They reported for help which they always received in an effective and sometimes colourful language. He developed in his students attitudes of loyalty and respect which they carried over to their employment. Consequently, his graduates were always in demand by the survey industry.
>
> Socially, I found Church to be a different person. We were always invited to his home after the Graduation. He and his wife were most gracious and kind. He was skilled at flattering the ladies and after our first visit Evelyn thought he was wonderful. On another occasion, he presented her with a rose at the Annual Convention. Of course he had roses for other ladies but Evelyn didn't notice that. [*Green*]

Like most people, Church was a mixture of opposites. He could be as polished and suave as he normally seemed abrupt and brusque. His ordinary inclination, having given someone a task, was to leave him alone to get on with it, though he had no hesitation in correcting or altering arrangements which did not suit him. How much value he placed on some of the ordinary formalities of running a school, such as opening and closing ceremonies, is open to debate. Shortly before the first class under the Vocational Education Division began in 1949, E.K. Ford wrote to ask what plans he had for opening the school. Church responded to the effect that he had none beyond opening the door at 8 A.M. and getting down to work. Rumour has it that annual graduation exercises, in the early days, were arranged at the insistence of departmental officials. Church is reported to have announced that, left to his own devices, he would on the last day of classes shake each graduate by the hand, give him his certificate, a pint of beer, and his own good wishes. As in character as the story sounds, it is probably of doubtful truth; certainly the part about the pint of beer is suspect. There would have been no wholesale distribution of the product. When a student attended Sunday dinner at the Church home, account was taken beforehand of his age. Those over twenty-one were offered a sherry, or some such; for those under that age, a soft drink was *de rigeur*.

Graduates

The surveying skills acquired in Church's program would be the means of getting the graduate his first job. From there on things would be pretty much up to the individual with respect to how long he stayed, or how far he progressed while there. A surprisingly high proportion of graduates stayed in surveying and mapping and went on to accept broader responsbilities in successive stages of the work for which they had initially been trained. Probably 80 to 90% of those who graduated in the early years made one or

another of the surveying and mapping disciplines their life's work. Quite a few graduates reached senior positions in government or industry. Several started and developed private survey firms of considerable size and sophistication. All this, of course, pleased Church who would from time to time offer comment on one graduate or another who was doing well. But he always made it clear that success depended upon the individual making himself ready to take advantage of opportunities when they presented themselves.

Success stories are fine, but success is always a relative term. It was entirely within Church's character that he would equate progress to success, and that he would reward one who came further rather than one who scored higher. At school closings in the early days, one prize only (which probably came from his own pocket) was offered: for the Student Making the Most Progress. For many years now, this prize has been awarded annually in his name by the Association of N.S. Land Surveyors.

Periodically letters would come to him from graduates on their first jobs. One in 1957 was not untypical: the salary was $350 per month plus a $240 per month expense account on the road. One of the accompanying comments, "Survey School certainly paid off," seems a pretty good all round summary of things.

Retirement

Graduation exercises in May 1963 saw James Church in attendance for the last time in his official capacity as first Principal of the N. S. Land Survey Institute. That evening the Churches were guests of honour at the Cornwallis Inn, Kentville, at a reception arranged by former graduates. A.B. Grant, his first assistant with the civilian survey classes, made a presentation to the Churches on behalf of all present. As well, honourary membership in the Canadian Institute of Surveying and Mapping was conferred upon James Church. Limited to fifteen persons at any one time, this was signal recognition of his accomplishments from his professional associates. Church had, without any question, met the required standard: "eminence in one or more fields of endeavour connected with surveying and mapping." On a later occasion the Lawrencetown and District Board of Trade, at a testimonial dinner, paid tribute to his "untiring zeal ... foresight, perspicacity and energy in efforts to enlarge the size and scope of the training courses given at the Institute."

When classes began again in the autumn, it was found that Church had been replaced by two people. Colonel George E. Streb MBE, PEng, who had retired that summer as Commandant of the Royal Canadian School of Signals, was appointed Principal; Philip M. Milo, NS Land Surveyor and a graduate then employed with the Department of Lands and Forests on Crown land surveys, came as survey instructor. Within a year or so George

Streb would become a Nova Scotia Land Surveyor — some years since and a long way away from his early survey experience in Saskatchewan.

In 1931, instead of continuing as a mining engineer, James Church had opted to "retire" and become a gentleman farmer, a move which was a strategy to survive the Great Depression. Over 30 years later he would enjoy four years of a second and authentic retirement. He died suddenly and unexpectedly at his home in Lawrencetown early on the morning of Saturday, 24 June 1967 while engaged in those regular exercises he did on awakening, and before getting up to start the new day with a cup of tea.

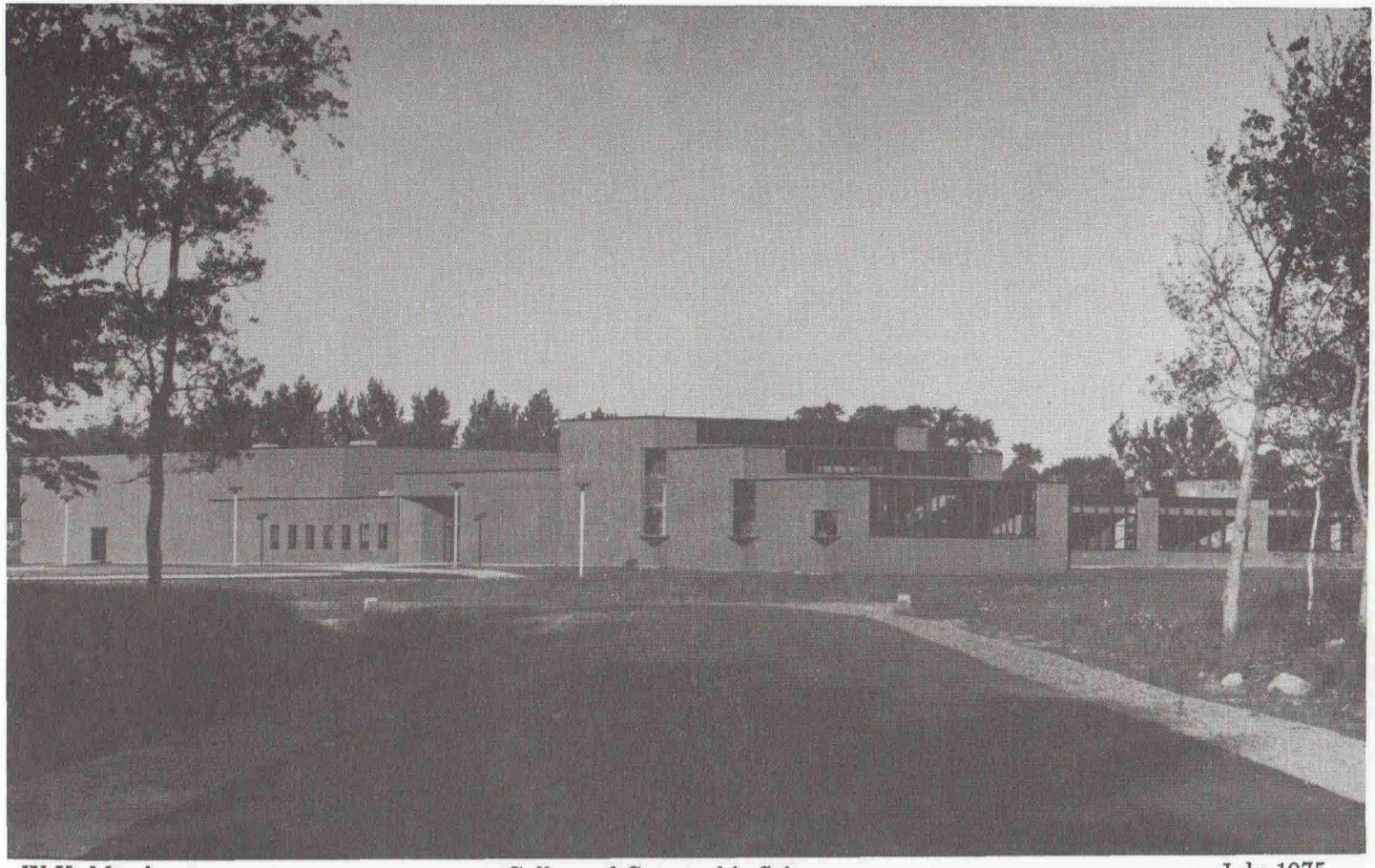
Shortly after Church's death some of his "old boys" discussed the prospects of offering a scholarship in his memory. This was impracticable at the time for it would have involved raising several thousand dollars to establish even a modest annual award. In 1972, however, the Canadian Institute of Surveying and Mapping established a $50,000 Scholarship Fund for technicians and technologists enrolled in surveying and mapping programs in community colleges and technical institutes throughout Canada. James Church was recorded as the first Patron of the fund when a number of his former students collectively donated over $1,000 in his memory.

College of Geographic Sciences

By 1968 a wider variety of programs were being offered at the Institute, and enrolments had increased proportionately. The building that had seemed so spacious ten years before, was badly overcrowded and two temporary classrooms had been added on the back lawn. In 1973 the Government of Canada made a special grant to the Province of Nova Scotia; the only condition attached was that the monies be used for educational purposes. From this grant came the funds to provide the institution with the lands and quarters it now occupies. The Deputy Minister of Education at that time was Dr. Harold M. Nason who, at Lawrencetown over 35 years before, had begun his teaching career in Nova Scotia.

After the building had been completed in 1975, a memorial plaque was placed within:

Major James A.H. Church DSO MC PLS
1883 - 1967
Miner, Soldier, Surveyor, Teacher
Born In India, Educated in Scotland,
His Home Was Lawrencetown
In 1948 He Established In This Community
A Formal Course Of Instruction In Land Surveying
His Zeal, Foresight And Dedication Ultimately
Resulted In The Creation Of This Building



W.K. Morrison College of Geographic Sciences July 1975

By 1985 an enhanced range of programs had been established to train technicians and technologists in the fields of surveying, mapping, land-use planning, remote sensing, and related computer programming. In the spring of 1986 a new name — Nova Scotia College of Geographic Sciences, fully descriptive of its contemporary and future role — was given what had begun in modest and very different circumstances over forty years before.

The College has a good reputation, and enjoys a close affiliation with Acadia University, N.S. College of Art and Design, Memorial University, Technical University of Nova Scotia, University of New Brunswick, and Waterloo University. Arrangements have been made with these and other institutions for advanced standing to be granted graduates who choose to pursue further studies.

There have been a good many changes since Jimmy Church taught his last class over 25 years ago, and even more since he began his topographic survey classes in 1942. Those who attended school while Major Church was in charge, and who have many times enjoyed discussing that very impressive year spent under his direction, will appreciate what two Glaswegian pipe-majors probably had in mind when they wrote of *their* tutor:

> *Although his teaching and his personality have added a great richness to our lives, we do not seek (as other pupils of famous masters sometimes do) to give the impression that he was just less than a god. For at times he seemed more like the devil himself.*

— o O o —

R.M.S. "Ivernia" Sunday, October 4, 1914

SERGEANTS MESS
MENU

Consommé au Riz

Boiled Salmon — Hollandaise

Cotelettes d'Agneau — Macedoines

Ribs of Beef — Railfort
Celery Fed Duckling

Spring Carrots Rice Boiled Potatoes

Salad

Gelée au Vin Patisserie

Plum Pudding

Ice Cream

Dessert Cheese

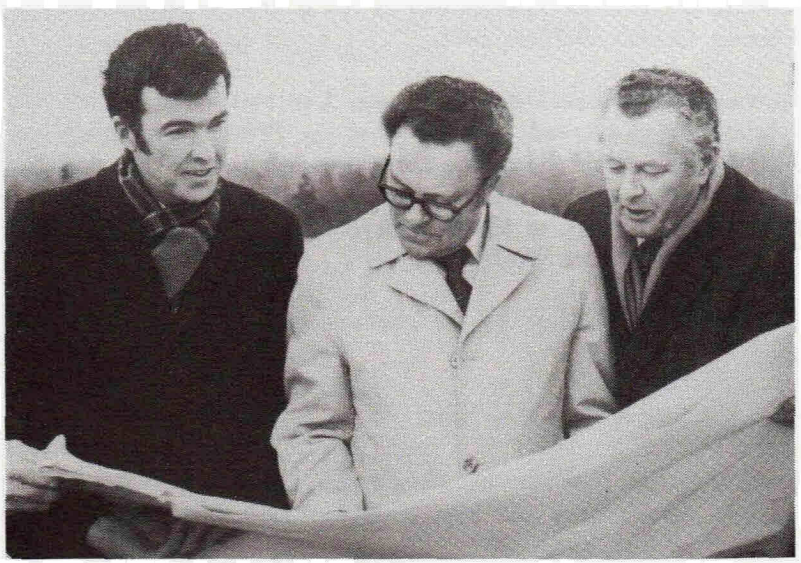
Coffee

CUNARD LINE

(From the postcard collection of Mrs. Dorothy Dobson, Port Williams, Kings Co., N.S.)

College of Geographic Sciences
Sod-Turning Ceremony
January 1974

J. William Gillis, Minister of Education,left; Mrs. Beatrice M. Church; James F. Doig, Principal; Peter M. Nicholson, Minister of Finance



J. William Gillis, Minister of Education; Peter M. Nicholson, Minister of Finance; Harold M. Nason, Deputy Minister of Education

Photos N.S. Information Service

Church, J.A.H.C., "Training of Land Surveyors," *The Canadian Surveyor*, Vol. 9, No. 8, April, 1948. Brig. Lyon led the discussion which followed presentation of the paper.

Church, J.A.H.C., "The Nova Scotia Land Survey School," a brief prepared in 1957 for the Department of Education on past operations, current resources, and future needs to meet industrial requirements. See also "Major Church's School," Chapter 16 of Thomson, D.W., *Men and Meridians*, Vol. 3, Ottawa, 1969.

Cousins, L.B., "The Life and Times of James B. Hall, Ph.D.," *N.S. Historical Quarterly*, Vol. 10, No. 1, March 1980. Copies of Mrs. Cousins' account are available from the College of Geographic Sciences, P.O. Box 10, Lawrencetown, Anna. Co., N.S., B0S 1M0, on request and free of charge.

Cunniffe, Capt. R., undated, "The Militia Regiments of Alberta 1901 to 1939," compiled under the auspices of the Riveredge Foundation of Calgary.

Davis, Major A.W., "Tunnelling Reminiscences," published in a Canadian Institute of Mining and Metallurgical Bulletin, Montreal, 1919. A like article, "Mining on the Western Front" by Capt. J.W. Walker MC was read to the South Wales branch of the Institute of Mine Surveyors of Great Britain in 1920; it was republished in the quarterly *Land And Minerals Surveying*, London, October 1988.

Department of National Defence, Ottawa. A request to the Records Section for dates of rank elicited the reply that the *Privacy Act* prohibited the release of such information. The Directorate of History was most helpful with respect to the Dragoons, but staff "was unable to find any information on Major J.A. Church or the transfer/loan of Canadians to the British Forces during the First World War."

Ford, E.K., letter 27 May 1949, to Lawrencetown Branch, Royal Canadian Legion.

Green, E.A., letter December 1984.

Grieve, W.G. and Newman, B., *The Story of Tunnelling Companies Royal Engineers, during the World War*, H. Jenkins Ltd., London, 1936.

History of the Corps of Royal Engineers, Vol. V, Chapter XVIII, Chatham, 1932.