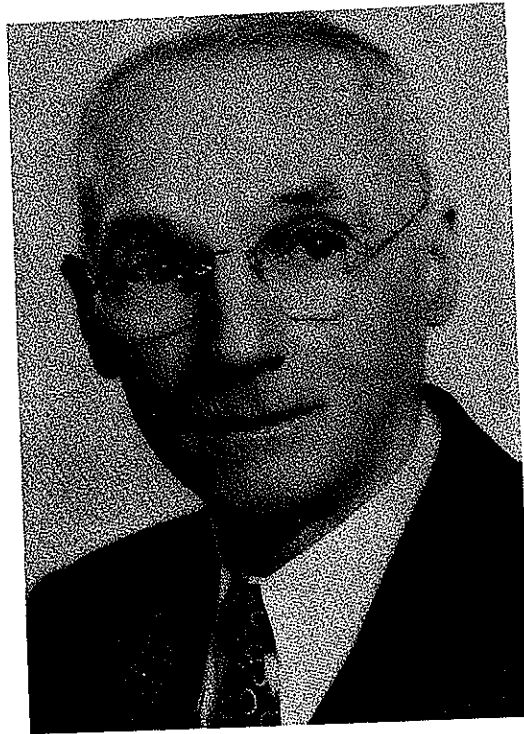


ASSOCIATION OF ONTARIO LAND SURVEYORS



JOHN EDWIN JACKSON, O.L.S., D.L.S., P. Eng.

1881 – 1974

by K. H. McConnell

The surveying profession lost one of its most eminent members in the person of John Edwin Jackson who died January 23, 1974. An Ontario and Dominion Land Surveyor and a Professional Engineer, Mr. Jackson had dedicated himself to the advancement of his profession as can be seen from this brief account of his full and most interesting life.

Born on December 27, 1881, the son of Mark Jackson and Eliza Washington, John Jackson spent his childhood years on a farm in his native East Oxford. He received his education at Woodstock Collegiate later becoming an instructor at Woodstock Central School and then teaching public school in the Woodstock area.

In the early nineteen hundreds, the young man entered the University of Toronto, where he majored in Civil Engineering. One of John E.'s first encounters with surveying was a summer job he held after his first year at university. At this time, John E. accompanied Jim Dobie (who had done more bushwork in northern Ontario than most surveyors at that time) northwest to Fort William where they laid out Internal Township Fabric six miles by eighteen for the Grand Trunk Pacific Railway. That summer they laid out three blocks, the area in which they were working being the branch that came down towards Fort William.

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Graduating in 1909, John E. began his career as an engineer for Crown-Gypsum Company at York on the Grand River, John E., in reminiscing one day, recalled his first project, an engineering job downstream from Caledonia. The Grand River flowed down through Caledonia and there were high banks along the shores leading down to the river. A tunnel had been built from the normal bank of the river into the gypsum plant and since the tunnel was too small to set up levels, he took a level off the tipod and set the level on the rocks in order to run the levels from the river into the gypsum mine and back again. He left the Crown-Gypsum Company one year later in order to article to W. H. Fairchild, O.L.S., in Brantford.

In 1911, John E. Jackson became an Ontario Land Surveyor, the following year becoming associated with V. W. Tyrrell, O.L.S., D.L.S. in Hamilton. During this period, John E. specialised in D.L.S. contracts in Manitoba, namely on Lake Martin, Grindstone Point, Lake Winnipeg and Dauphin River. It was during this association that John E. was persuaded to try for his D.L.S.

In the laying out of townships in and around Lake Winnipeg, John E. used to tell of many of the scenes. Between twenty and forty men took several teams of horses into the bush for a full season, not coming out again until well after the freeze up and sometimes well into the winter, and this was necessary because it was the only time during which they could measure across the lakes and muskeg by traversing the lake or marsh on the ice. Horses and sleds would pull the camping equipment and there would be two sets of crews, the surveyors, and the cooks and their staff who would follow along afterwards. The camp staff would set up camp ahead of where the survey team intended to begin work, and the survey team would cut something in the order of three or four miles in one day in the direction of the camp, and then the next morning the surveyors would proceed for three miles ahead of the camp. While the survey team continued at its work, the camp would be dismantled by the cook and his helpers, packed on horses and pushed ahead to a point beyond where the survey team was at work cutting bush, laying out line and measuring. All field notes were written at night by the light of a candle and mathematical computation was done in preparation for the following day. Observations were taken at night, on Polaris, usually.

John E. recalled one incident when they traversed fifteen miles down the open shoreline, along the ice tieing in the shoreline, and this they did in one day. They would set up the transit and orient it so that for a zero reading the telescope would be pointing to north. They would then turn the upper plate along the first line of the traverse so that the instrument would read the azimuth of that line. Leaving the upper plate clamped in this position the transit would be moved to the next station where they would invert the telescope and point back along the first line using the lower motion. Then reversing the telescope (to the direct position) and using the upper plate point along the second line of the traverse, the

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instrument would then read azimuth of this second line. These steps would be repeated at each succeeding station in the traverse so that the azimuth of each line would be read directly from the instrument and recorded. On one particular occasion they found that they had made a mistake somewhere in the middle, and had to redo the whole fifteen miles because one angle was misread.

On one of his expeditions into the bush, John E., accompanied by Jim Dobie, his brother (who was an instrument man) and a cook, were required to survey an area near Lake Winnipeg. Because of the difficult terrain, it was necessary to travel by water, but all they possessed in the way of watercraft was an old canvas-covered ribbed canoe, and John E. and his partner, both unfamiliar to water travelling, were inexperienced in paddling a canoe. For a seat they placed a piece of birchbark across the back of the canoe but that raised them too high in the boat, and consequently, about one hundred feet from shore the canoe capsize. John E. dogpaddled his way back to shore, his chainman emerged ahead of him and they dragged the canoe back to dry land. All their gear, instruments and lunch were in the canoe at the time of the accident, but lo and behold, when they righted the canoe everything was still there! Apparently the equipment had been caught in the upper end of the craft and remained in the boat, this being the reason the canoe had remained overturned in the water. Leaving the craft on the shore they walked back to where Jim Dobie was working, only to discover that they were supposed to have read an angle and measured the base line. Jim asked if they would prefer a more experienced person to return with them, but John E. insisted that he and his chainman were capable of finishing the job themselves. John E. felt that if they hadn't done the task on their own, they would always need an extra fellow to go along just to manoeuvre the canoe. They overcame their fears by going back and forth to the island to read angles and become reasonably proficient canoeists by the time the project was complete.

The year 1916 saw John E. take up his new position with the Federal Department of the Interior. He continued to work out of Hamilton in the field of D.L.S. surveys; laying out township boundaries in the remote areas of Manitoba and Saskatchewan. He discontinued his western work three years later, this time becoming associated with J. J. MacKay and Ernest G. MacKay. Upon leaving this firm, John E. relocated in Windsor where he spent five years with Guy Kennedy, Engineer and Surveyor, in Detroit. He was laying out curves for subdivisions and precalculating them for the layout after the design had been made with the french curves. However John E. found great problems in trying to fit in the french curves. With the help of Louis B. Stewart, Professor of Surveying and Geodesy, University of Toronto, they evolved a method with a few straight lines whereby they could adapt to any curve and precalculate the positions for the points on the curves without any great difficulty.

After a brief period with landscape architect, T. Glenn Phillips, Mr. Jackson became a professional engineer (1930) and commenced what was

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to be a twenty seven year term with the Surveys Branch of the Ontario Department of Highways. One of his many projects during this period was the triangulation and layout of the Sarnia-Port Huron Bridge and approach. At this time C. R. Young was Professor of Structural Engineering at the University of Toronto, specialising in bridge design. When the Port Huron Bridge was being designed in Washington, Cyril Young checked over the design before John E. laid out the control. One incident which occurred during John E.'s association with the Department of Highways illustrated his complete intolerance for sloppy work. John E. had quiet and unassuming nature; rarely was his voice raised in anger, and it was a considerate shock to the forty of fifty men employed in the drafting office to hear his annoyance when he found that someone had prepared a plan with intended neglect and caused erroneous material to be certified under John E.'s name. The startling effect was so shattering that all work ceased while the tirade against the misfit was levelled. It demonstrated without any equivocation that while John E. had a quiet and unassuming nature, he would permit only the best care and effort in connection with any project he was to undertake, and he expected the same of all those under his supervision. John E.'s popularity jumped up a good ten points that day!

During Mr. Jackson's 27 years with the Department of Highways he advanced to a senior position in the Survey Branch. He left a legacy of excellent work and he was involved in many things which were to be of benefit to the Department long after he left. Among his contributions of note were the following; —

1. A research into the accuracy of sun observations in comparison with Polaris observations for the purpose of establishing reference meridians for legal survey work.
2. The Development of formula for the easy computation of curve intersections with the assistance of Major W. Baird.
3. Development of a standard process for checking legal Plans of Surveys.

In 1958 John E. Jackson spent a year at Land Titles in Toronto where he specialised in checking the plans of rights of way of Trans-Canada Pipelines across the province.

In the early sixties John E. returned to private practice, joining with Kenneth H. McConnell, O.L.S., the firm being known as McConnell-Jackson. Here he specialised in the investigation of inaccuracies in early surveys and settled boundary disputes. There was no task too demeaning or minor that he could not tackle with interest. In the late fifties and early sixties when electronic computation was still in its infancy, John E. was given the very simple task of computing a rather complex subdivision with many curves, and he tackled it the same way he had done for that firm in Detroit in 1924, with as much enthusiasm and interest as in those early days, and no doubt in much the same manner. The only difference this time though, was that his physical body needed more frequent rest and he

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had the habit of working merrily away and, suddenly feeling drowsy, would close his eyes and without moving pencil or paper would rest contentedly for fifteen minutes, and upon having rested would open his eyes and continue writing the digit he began before falling asleep. He did a 210 lot subdivision in 1960 and no changes were necessary on the final plan once the staking was finished. During the summer of 1961, John E., feeling fit and vibrant, decided to tackle a complete level job of over 400 acres by himself and one young assistant, Brian McQuiggan. The two of them did a most detailed contour and topographic survey of what is now Thistletown Ontario Housing Project, and this work, was used in its entirety for the complete design of the subdivision works.

The years 1963 to 1967 saw John E. associated with Department of Municipal Affairs in the establishment of municipal boundaries.

Much of Mr. Jackson's leisure time was also devoted to the advancement of our profession. He was a member of Council for three years (1936-1939); Vice-President of the Association for the year 1954-1955, and held the position of President the following year. In addition, he was a member of the first Education Committee (1946) and occupied the seat of chairman on several occasions. He assisted in the preparation of the first lecture course for intermediate and final examinations, and taught spherical trigonometry and astronomy for many, many years.

Immediately following World War II, the veterans were returning to the University of Toronto in very large numbers, especially to the Engineering Faculty. To help out with the very unusual staff requirement, Mr. Jackson taught part of the field program in the Department of Surveying and Geodesy.

John E. continued his dedication to the education of young surveyors, and, in 1950 was appointed to the Board of Examiners of The Association, a position he held until the year before his death.

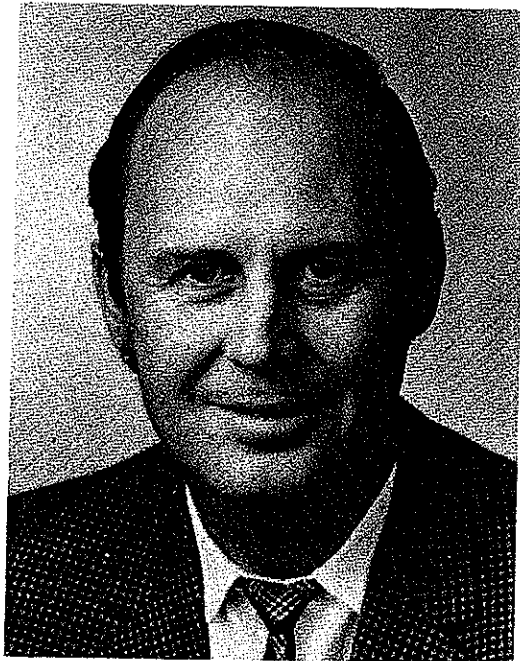
A recipient of the federal Centennial Medal for service to Canada, John E. Jackson's untiring efforts on behalf of his profession were recognized, and appreciated, by his colleagues, who, in 1968, awarded him the Professional Recognition Award of the Ontario Land Surveyors Association. Mr. Jackson was appointed the honorary President of The Association in February, 1971, a position he held until his death.

Mr. Jackson had been active in the United Church for many years. From 1926 to 1937 he was Clerk of Session at Riverside United Church (Windsor) after which he spent eighteen years as Clerk of Session at St. James-Bond United Church, Toronto. He had been a life member of session since 1963. Mr. Jackson was also active in the Independent Order of Foresters.

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John E. Jackson was married to Lulu C. Nash from Dunville and is survived by their daughter Kathleen (Mrs. Robert E. Brobst) of Toronto and granddaughters, Brenda, Sylvia and Carla.

While John E. Jackson's career was remarkably active and long, his dedication to surveying can be seen from the fact that at the age of 82 or 83, John E. performed the most startling feat of any surveyor we know, when he displayed that he was still quite able to pound a standard iron bar into heavy clay with as much strength and sureness of eye as any young gaffer of 20. This demonstration proved beyond doubt that John E. was really one who loved his profession from the day he started until he died and his ability and devotion to his profession will always remain an inspiration to all of us who try to follow in his footsteps.



DONALD CAMPBELL SMITH
B.Sc., O.L.S., P.Eng.

1926 – 1973

by Bill Card

Donald Campbell Smith was born in St. Catharines, Ontario June 23rd, 1926 to Campbell Taylor Smith, O.L.S., and Verna L. (Hetherington) Smith.