



THE MANITOBA PROFESSIONAL ENGINEER

June, 1965

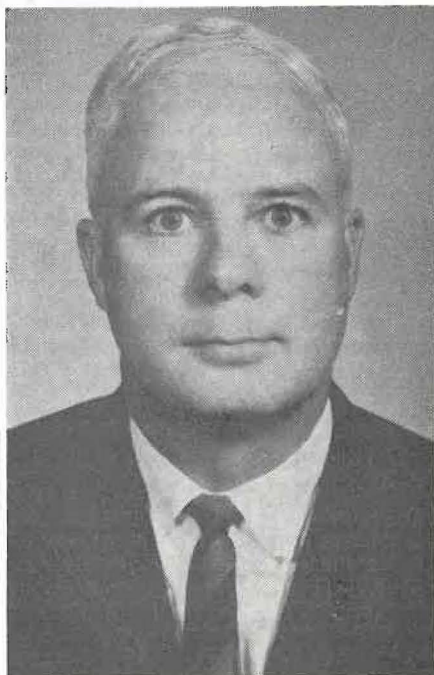
Bulletin of the Association of Professional Engineers of the
Province of Manitoba

NEW REGISTRAR

Starting June 1, 1965, Mr. Terence W. Algeo, P. Eng., becomes the Association's permanent Registrar. Mr. Algeo received his B.Sc. degree in Electrical Engineering from The University of Manitoba in 1950. Prior to his engineering career he spent a year as an apprentice electrician in the Canadian Pacific Railway Weston Shops, and over four years as a technician with the R.C.A.F., serving overseas with the Tactical Air Force in England, France, Belgium, Holland and Germany.

Following graduation he joined General Motors Diesel as Project Engineer. In 1955 he joined Canadian Westinghouse Co. Ltd. as Co-ordinating Engineer of Special Projects, and then became Section Engineer of the Small Motors Engineering Section and finally the Engineering Manager of their Small Motors Plant in Stratford. He returned to General Motors Diesel in 1956, working there until 1958. Since then he has been the Engineering Manager of Pritchard Engineering Company in Winnipeg where he was responsible to the President for all phases of engineering within the Company. His work has included product design, co-ordination, applications engineering, sales, prototype testing and the training and direction of technical assistants.

Mr. Algeo is a native Winnipegger of Irish descent. He is married and has four children. His hobbies include skiing, tenting, flying, photography, and aircraft construction.



T. W. ALGEO, P. Eng.

He is a member of the A.P.E.M., the E.I.C. and the A.P.E.O. He also belongs to the Experimental Aircraft Association, the Winnipeg Flying Club, and the Flying Farmers.

His wife, Peggy, is a member of the Professional Engineers' Wives Association.

SPRING GOLF TOURNAMENT

Friday, June 11th, 1965 - Breezy Bend Country Club

Published by the Association of Professional Engineers of the Province of Manitoba
418 — 265 Portage Avenue, Winnipeg 2, Manitoba

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Vice-President—R. T. Harland, P. Eng.

Secretary and Registrar — T. E. Weber, P. Eng.

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President's Message

By S. J. BORGFORD, P. Eng.

Of major importance to all members are the following four items:

- (1) Your new Registrar is Terry Algeo.
- (2) A general meeting of the Association recommended (a) a new schedule of charges; (b) A study of the Code of Ethics and (c) A study of the A.P.E.M. Act.
- (3) Professional Engineers in Provincial Government employ do not want collective bargaining.
- (4) Engineering Technicians and Technologists will form a Society.

After a lengthy consideration by Committee of Council, as a whole, Mr. Terry Algeo was appointed to the position of Registrar. Terry is a Manitoba graduate in electrical engineering. He will assume his duties on June 1st. He is an excellent addition to our very competent staff.

The general meeting of the Association held March 22nd, approved the new schedule of charges that were circulated to the membership. Copies of this new schedule, together with our Code of Ethics, are now being printed in booklet form. These will be available at a nominal charge to cover the cost of printing.

This meeting also recommended that a review be made of the Code of Ethics with the report presented to a future meeting. Rules of



S. J. BORGFORD, P. Eng.

conduct must be clearly stated to be understood and for that matter to be corrected. In the grey areas general acceptance sets the Code of Ethics.

A further recommendation was made with regard to possible revision of the A.P.E.M.

Act. Two items in particular were singled out for study. First under the present Act there is a cloud over corporations practising engineering. The Act states in Section 16 that no partnership, corporation or association of persons shall be registered as members of the Association or licensed to engage in the practice of professional engineering. Second, a request was made to review the definition of engineering works as outlined in Schedule A.

While dealing with matters of concern to the consultant, I would like to mention that the Association of Consulting Engineers of Canada invited local consultants to a luncheon meeting. While this Association is incorporated under a Federal Charter it has no legal jurisdiction over engineers. Its purpose is to promote understanding between consultants and recognition by the public at large. The large turnout at the meeting unanimously agreed to meet monthly to discuss matters of common interest. The A. P. E. M. welcomes the aid of all organizations working for the development of the engineer.

Engineering Technicians and Technologists want a Society that will advance their status and welfare, that will aid in increasing their knowledge and proficiency and bring to the attention of the public and industry their particular ability. A meeting held on May 3rd, sponsored by the A.P.E.M. was addressed by the Chairman of the Engineering Technicians Committee, Mr. A. C. Warrender, P. Eng. He explained the structure of the proposed organization and the grades of technicians and technologists. Mr. R. W. Dalton, Assistant Deputy Minister of Education, brought greetings from the Provincial Government. Your President chaired the meeting and Mr. A. R. Low, P. Eng., was Secretary. The meeting was well attended, approximately 160 were present including about 20 professional engineers. It overwhelmingly approved in principle establishing a Society with the objectives and by-laws presented.

Permissive legislation, allowing for collective agreement, has been incorporated in Bill 64, an Act to amend the Civil Service Act. Professional Engineers in the provincial government employ have requested legal counsel and guidance in their effort to be excluded from this Act. Council supports the view that they should resist the establishment of collective bargaining organization for professional engineers. Collective bargaining appears incompatible with professionalism, and its implied protection of the public. Professional engineers are being canvassed to state their points of view on this subject.

EDITORIAL

In any organization where membership is wholly or partially on a voluntary basis an increase in members' dues or annual fees will tend to cause a corresponding decrease in overall membership. While membership in this Association is not entirely voluntary, in that it is a legal necessity for practising engineers, there are two segments of our membership to whom membership is a voluntary matter. These are those members who have retired from active practice and those members who are practising outside the Province of Manitoba. There is a third group where there is a reasonable doubt regarding the necessity of being a registered professional engineer and that is the large group of engineers employed by large corporations or government agencies. These individuals, generally working under several levels of supervision, both professional and non-professional and whose work represents contributions toward larger engineering projects authorized by higher levels of management, are justifiably hesitant in joining an Association whose value to themselves is somewhat obscure.

At the year end of 1964 this Association listed 1397 members. As of April 30, 1965, the paid up membership stood at only 1214. This drastic drop of 183 individuals is even worse when you consider that the paid up membership includes 27 new registrations. In fact a total of 48 members have resigned outright and another 142 have not yet paid their fees. While there is still time for the latter group to pay the penalty fee and retain their standing, it is very unlikely that many of them will do so. This means that over 13% of last year's membership will have resigned. This is an extremely high percentage and indicates that our Association is not as "healthy" as it should be.

In other organizations, for example golf clubs, there is little that can be done to retain members who resign because of a fee increase. However, in an Association such as ours there is much that can be done and much that should be done. The first step should be to analyze the problem to determine the category, location and, where possible, the reason for each resignation. Without this statistical data it is difficult to analyze the basic reasons for the resignations. It can only be surmised that these members do not believe that they are getting their money's worth from the Association.

If the statistics should indicate a high percentage of resignations from the retired or out of province members, then perhaps consideration should be given to making an "in-

active" membership at a lower fee open only to the retired professional and possibly to out of province members. Although this would create some additional administration it would be worthwhile if the membership increased, especially if it helped to retain in the Association those retired members who gave so much in the past.

Retaining the "employee" engineer in the Association is a more complex problem depending in part on his individual viewpoint as to what services he thinks he should be getting for his money. There are likely almost as many different opinions to this as there are individuals. Probably one of the biggest steps towards retaining those now registered and even towards adding those who are now unregistered would be to increase the recognition of the Professional Engineer, both by the public and by the larger corporations and government agencies. It is toward this goal that the Association's activity should be directed not only for the sake of the employee engineer but for the sake of each and every individual member. Only through wider recognition can we hope to maintain and to improve the engineering services provided to the public.—G.R.K.



FEEES A LA BOURINOT

The meeting called to consider and adopt a new Schedule of Minimum Fees to be charged by Consulting Professional Engineers, did just that. In addition, the Council was directed to strike two committees — one to review the Code of Ethics with emphasis on procedural methods to enforce the code, and the second committee to review the Engineering Profession Act, with particular reference to Section 16 and Schedule A (work undertaken).

President S. J. Borgford, in the Chair, exercised his rights in and out of Bourinot's Rules of Order, in controlling the largest turnout of members (95) for such a General meeting.

Mr. A. G. Moffatt, on behalf of the Committee studying the Minimum Schedule of Fees, presented the summary of statistical data collected over the past two years. Mr. Greer, Mr. A. Dyregrov and Prof. Mindess reviewed the aspects of Advisory Services, Pre-Design Services, Design Services, Resident Supervision and Payment Scales.

It was shown that the present Manitoba

Schedule of Minimum Fees was below all other corresponding schedules in Canada. The proposed schedule of fees offered by the Committee and adopted by the meeting, is approximately equal to that of Ontario and B.C., but below that of Saskatchewan and Alberta.

Councillor R. T. Harland showed that while general salaries in Manitoba had increased approximately 44.8% since 1955, and those in the construction industry 54.2%, the average increase proposed under the Per Diem rate was 36.5% and under the Percentage of Cost Rate 43.1% over those in the existing (1955) Schedule of Fees.

The meeting was lively and intricate on a procedural basis. Members could profit by becoming more familiar with the rules of the game by Bourinot. Some who appear to take their example from the political antics of the Flag Debate should remember that the meetings and their Association are designed, in the words of Alexandre Dumas, "All for one, one for all." It is easy to create schisms but harder to heal. A meeting can be animated without vendettas.—E.A.S.



OFFICE SPACE INCREASED

Visitors to the Association offices will notice that the floor space has now been doubled by the addition of a doorway into the adjoining room. This room has been redecorated and redivided into a storage space and a board room, the latter being much appreciated by both the staff and the committee and council members who previously had to cope with the Association's business under cramped conditions. The improvement was a long time coming and is certainly worth while.



SEMINAR SPEAKER

D. M. Stephens, P. Eng., Chairman, Manitoba Hydro, addressed a Water Management Seminar being conducted by the Department of Sanitary Engineering and Water Resources at The Johns Hopkins University, Baltimore, Maryland, on Monday, April 5, 1965. The topic of Mr. Stephens' address was "Canada-United States International Water Problems." Mr. Stephens is a member of the Association of Professional Engineers of the Province of Manitoba and has served on Council of the Association for 6 years.

In Memorium

TRIBUTE TO THE LATE NATHAN S. BUBBIS, P. Eng.

by W. L. WARDROP, P. Eng.

The untimely death of Nathan S. Bubbis on February 23 came as a great shock to his family and to his many friends throughout Canada and the United States. For "Nat", as he was known to his close associates, travelled extensively in the conduct of his work with the Greater Winnipeg Water and Sanitary District, more recently known as the Water and Waste Division of the Metropolitan Corporation of Greater Winnipeg.

My personal association with the late Mr. Bubbis dates back to 1948 when I succeeded him as Engineer of Water Works and Sewerage with the City of Winnipeg Engineering Department, a position he had held since 1944. Throughout the intervening years from 1948 to the time of his death, I had the privilege of being closely associated with him in business and professional affairs. He possessed an amazing capacity for learning intimately the details of any project or subject within his sphere of activity. He was particularly adept in the art of discussion, an excellent communicator and keenly interested in current affairs. One was never in doubt about the intent of his word for he was explicit to the last detail.

Over the years, "Nat" gained the highest respect of his fellow-engineers. As one of his close friends has said: "He lived for his family and for his profession". I well believe this as he gave unstintingly of his time and effort to his many fields of interest. Typical of this was his role as Chairman of the City of Winnipeg Rehabilitation Committee following the 1950 Winnipeg Flood and the fact that his services were made available to Kansas City during their tragic flood of 1951. In 1957, during his term as President of the Association of Professional Engineers of the Province of Manitoba, he played an important role in the preparation and presentation of the Association's Brief submitted to the Royal Commission on Flood Cost Benefit.

In addition to his Association Membership, he belonged to many technical and executive groups and held official appointments within them. He was awarded the Lindsten Memorial Award for outstanding work in promot-

ing interest in the Western Canada Water and Sewerage Conference activities. He was well-known in the field of Water Pollution Control and was a Past President of the Canadian Institute on Pollution Control. At the time of his death, he had been nominated as a Director-At-Large for the Water Pollution Control Federation.

His colleagues in the business and professional fields deem it a great privilege to join with his many friends in providing a Memorial Fund at the University of Manitoba to support an Annual Bursary in the Faculty of Engineering in his honour.

I am sure it would be the wish of "Nat" that this fund be used to help deserving young students further their Engineering studies. Perhaps some of these students may one day choose as their career the field of public service so conscientiously and energetically served by "Nat" for over thirty years. We share with his family a sense of deep loss for he was a stalwart member of our "Engineering Fraternity".



NATHAN BUBBIS MEMORIAL FUND

The establishment of the Nathan Bubbis Memorial Fund was recently announced. Members of the Committee sponsoring the Fund are:

Harry Singer, 894 Sargent Avenue, Winnipeg 3, Man.

D. S. G. Ross, P. O. Box 815, Winnipeg 1, Manitoba.

James W. MacLaren, 321 Bloor Street E., Toronto 5, Ont.

W. L. Wardrop, 456 Notre Dame Avenue, Winnipeg 2, Man.

It was suggested by the University of Manitoba, and approved by Mrs. Bubbis, that the annual award take the form of a Bursary, the terms and conditions of which to be determined after the objective has been reached.

An initial objective of \$15,000 was set and anyone wishing to contribute may do so by sending a cheque to the University Comptroller endorsed

"For The Nathan Bubbis Memorial Fund."

Water Conservation in Industry^{*}

By I. S. RAIDEL, P. Eng.

1.—Introduction—

The basis for a sound economy is productivity and conservation of resources. Since good quality water and an adequate supply thereof is one of the most important materials in modern industry, its conservation is a vital facet not only to industry but to the continued welfare of the nation as a whole.

We do not profess that the conservation and reclamation of water in industry will solve our overall water problem. On the contrary, we cannot afford to overlook any possible source of water supply commensurate, of course, with reasonable economic capital costs. Statistics indicate that as a nation we are consuming 325 billion gallons water daily, and it is estimated that consumption will continue to accelerate indefinitely, and by 1980 we will have reached a 600 billion gallons consumption daily.

On the other side of the ledger, we find that our estimated available supplies are 515 billion gallons daily. Large volumes of water are required in industry, agriculture and large metropolitan areas. Water conservation in industry, combined with re-use of sanitary waste (recharging of underground water basins) can help close the gap to some extent at a minimum cost per acre foot of water. The importation of water will still remain the prime supply source, but conservation and reclamation can serve to supplement imported water.

A pilot conservation program was developed and conducted by the writer for three years in one of our facilities which culminated in the reduction of 101,424,000 gallons of water in a 12-month period. The reduction of water consumption has reached the fifty (50) per cent mark. However, at that point the program was only seventy-five (75) per cent complete. It was conducted continually under actual operating conditions. We have often been asked this question: "Is water conservation in industry economically feasible?" With reference to capital costs, our experience has been that not

only is it feasible, but that the capital cost is less per acre foot than from any current source of supply at present. An important factor of water conservation in industry that has been completely overlooked are the fringe benefits, both to industry and to the community in which the industry is located, in the form of reduced capital costs for interceptors and sewage disposal plant capacity.

The writer estimated that if a genuine water conservation program was put into operation in industry throughout Los Angeles County, sufficient trunk sewer lines and sewage treatment plant capacity can be conserved to serve the sanitary requirements of an additional 500,000 population without any additional capital expenditures for trunk line and disposal plant: that approximately 55,000 acre feet of water can be conserved annually: that on the basis of average projected water rates for 1972 in Los Angeles County, water conservation can save industry \$3,800,000 on water bills annually.

2. Organization of a Water Conservation Program in Industry

A pre-requisite to an effective water conservation program in industry is to pursue the following course:

- A. Define the objectives. To get the maximum benefits from the program, the following objectives should be considered:
 - (1) Reduce water consumption.
 - (2) Reduce industrial waste effluent.
 - (3) Evaluation of capital improvements for determination of operating costs.
 - (4) Applicable quality control and code conformance.
 - (5) Long range planning.
 - (6) Training of personnel and distribution of information to rank and file on the water conservation program in general.
- B. Assign responsibility to an individual suitable for this type of task.
- C. Conduct a comprehensive survey of water usages on a daily, weekly or monthly basis. Water meters are essential to determine consumption for specific components.

^{*}An address presented on July 7, 1964, before the Engineers Club of San Jose, California. Mr. Raidel is a Consulting Engineer in the Space and Information Systems Division of North American Aviation, Inc., Downey, California.

3. *Methods of Reducing Industrial Water Consumption and Industrial Waste*

- A. Use of conductivity meters and solu-bridges on large capacity acid and alkali rinse tanks respectively.
- B. Control usage of water in cooling towers as follows: Maintain cycles of concentration based on a calcium sulphate solubility curve and/or the magnesium solubility curve consistent with the highest temperature of the cooling system and with due consideration to the scale factor. In addition to conserving water in cooling towers, evaluate losses of water and the relation to downtime due to cleaning, repair, etc. Unnecessary losses will result if the following conditions do not exist:
- (1) In multi-section cooling towers, one section may be shut off at a time, thus affording the possibility of cleaning each section separately without resorting to use of one cycle concentration of supply water.
 - (2) Multi-section cooling towers which are so designed that the whole tower must be taken down to accomplish either repairs or cleaning. If production requirements make it necessary to operate cooling tower at such time it is essential to limit downtime to a minimum. This can be done by careful planning and preparing all materials, equipment, manpower requirements, etc., before the tower is taken down.
- C. Avoid improper use of rinse water:
- (1) Do not attempt to rinse (immersion method) parts from two incompatible acids in one rinse tank.
 - (2) It is definitely a waste of clean rinse water to attempt to overcome a contaminated condition resulting from tank-corrosion, slime or sludge, by the use of unlimited volumes of water.
 - (3) It is a waste of rinse water to solve an external contamination condition by dumping rinse tanks daily or frequently; for example, if it is found that an alkali rinse tank utilizing zeolite soft water is continuously contaminated with sludge at the bottom of the tank, check the adjacent outside sources such as sandblasting units.
- D. Eliminate continuous flow of water in connection with equipment; for example, large grinders. One might ask the ques-

tion: Is Industrial Water the only substance that can be used for a particular purpose or can some other substance such as coolant which is already used in the machine be adapted to serve a double purpose?

- E. Make-up water in a large quench tank which normally amounts to less than 1% per day may lose large volumes due to the failure on the part of the operator to shut off the valve. The failure of the human element can best be solved by a mechanical device such as a float valve.
- F. Study the possibility of the economic use of cooling water from a degreaser. The physical layout of the area may be such that the water may be utilized economically nearby.
- G. Shut off all valves in the general area when not in use, and check for leaky valves.
- H. Instruct operators to avoid by-passing solu-bridges without justification.
- I. Maintain demineralizers in efficient and effective operational condition. Use of zeolite soft water in alkaline rinse tank in some instances may extend the dumping requirements for a long period of time.
- J. Use counterflow method in operating rinse tanks where practical.
- K. For general uses equip small rinse tanks with cellar siphon devices. These devices reduce water consumption drastically and cost only a few dollars to install.
- L. Re-use demineralized water from large acid rinse tanks. Quality resins will last indefinitely in demineralizer operations if the system is supplied with starting water which contains a minimum of total dissolved solids instead of industrial water from any source with a high content of total dissolved solids.

The suggested methods of reducing industrial water consumption are intended only as a guide because operating conditions of each and every item of conservation will vary and each item should be evaluated on its own merits.

4. *Monitoring the Program or Follow-Up*

Unless the conservation program is continually monitored and effectively controlled, it will deteriorate. Every conservation gain is an uphill struggle. Perhaps not so much technically, but because of the inherent human

element of resistance to change. Conservation gain is only the first step. It can be lost very quickly because conservation is not a fact, it is a process which is never ending as long as we want the program to function successfully.

5. Water Uses in California

The exploding population in California, Southern California in particular, and the Southwestern States in general has created a chain reaction demand for water in industry, agriculture and large metropolitan and urban areas. Manufacturing in California has risen in value since 1940 from \$1.5 billion to approximately \$14 billion at the end of 1963. It takes, for instance, 770 gallons of water to process one barrel of crude oil to convert it to gasoline; 2,000 gallons to process one ton of fish; 750,000 - 1,000,000 gallons to irrigate one acre for one year; 65,000 gallons of water to process one ton of steel. Under conservation controlled conditions, a 12,000 gallon acid rinse tank will discharge approximately 8,000 gallons per day. With no controls, it will discharge anywhere from 16,000 to 25,000 gallons per day. Depending on several factors, it takes an additional 3,000 to 6,000 gallons a day for the average medium sized cooling tower if operated at 1.5 cycles of concentration instead of 4 cycles of concentrations. In California we have approximately 6 million dwellings with approximately 1/4 million dwellings being added each year with an average single dwelling consumption of 8,000 gallons per month.

6. Water Conservation and Reclamation

Water conservation and reclamation in industry is not new. Unfortunately, when we take a careful look at industry, we cannot help but conclude that it is practiced to a very limited degree. What is needed is a universal application in industry based on an economically sound engineering approach. This, indeed, is one of the prime challenges that a professional engineer faces today.

7. Other Sources of Water Supply — Sea Water Conversion

Pounding at our shores is an infinite source of water supply 320 million cubic miles of sea water. When we say that all we have to do is remove the salt, we are indulging in an oversimplification. Conversion of ocean water has created much attention in the public eye. Although construction of desalination demonstration plants commenced in 1952, it was not until President Kennedy and Congress had given it the public boost that it brought the

attention it attracts now. Some of us are under the misconception that desalination is "fait accompli."

8. Economic Aspects of Water Conversion

While it is true that a number of demonstration plants for the conversion of sea water have been put into operation by the Office of Saline Water, Department of the Interior, and desalinated water is being produced, we have not as yet solved the economical aspect of this problem. For example, the Journal of American Water Works Association, Vol. 54, No. 5, May, 1962, reports that the OSW demonstration plant in Freeport, Texas, is producing fresh water at a cost of \$1.00 to \$1.25 per thousand gallons. A plant in Coalinga, California, is producing fresh water at \$1.43 per thousand gallons. On the basis of \$1.25 per thousand gallons, the cost of fresh water production per acre foot is \$408.50.

However, this is not the total cost. The desalinated water has to be pumped inland at a cost of \$28 per acre foot, and an additional cost has to be added to eliminate the corrosive characteristics of this water, and put it through a cooling system before it is transmitted to its destination. Pacific Gas and Electric Company has been converting water from the ocean for its power facility in the Morro Bay area at \$850 per acre foot. The Southern California Edison Company desalination plant, near Oxnard, Calif., produces water at approximately \$625 per acre foot. The U.S. Navy has utilized conversion plants on ships for many years. However, where large volumes of water are required, present methods cannot meet economical requirements. The conversion plant at Oxnard, California, produces 20,000 gallons of potable water per day, after a \$100 million, ten year federal program.

There is no doubt that the demand for converted sea water will continue to increase, but this will apply only to specific locations and circumstances which will generally be governed by economics, with each case being determined on its own merits.

9. Imported Waters

The construction of "saline water conversion plants" requires the largest capital layout per acre foot of water compared to other sources of water supply. The capital cost per acre foot for transporting Feather River Project water from Northern California to the west branch is approximately \$400. Compare this to the capital cost of the Point Loma Saline Water Conversion Plant where the cost is recorded at \$1460 per acre foot per year.

10. Reclaimed Water from Sanitary Wastes

This source of water is intended for secondary use only — recharging of underground water basins and irrigation. The economic feasibility of this source has been demonstrated by the Los Angeles County Sanitation Districts in the operation of the Whittier Narrows Pilot Project. In its publication "A Plan for Water Re-Use," July 1963 issue, Page 4, Table 2, the net cost per acre foot, after deducting the would-be cost for normal transmission, ranges from \$6.85 to \$17.75 per acre foot, plus the cost of supplemental of conveyance facility (capital plus operational and maintenance costs), if any.

11. Water Conservation in Industry

Our own pilot conservation project on a comparable amortization basis showed a capital cost of \$5.45 per acre foot. Of course, the capital cost will vary from plant to plant, depending on a number of factors, including the efficiency and effectiveness of the operation of such a program.

After deducting the capital cost and, not counting the capital savings of \$100,000 which was planned for a supplementary waste system (which was eliminated because of conservation), the program showed additional, substantial savings on such items as water bills, labor, reduction in demineralization cost, etc.

Members of the legal profession who specialize in the legal aspects of water have been and are being heard in our law courts and sometimes in the halls of Congress. The engineering profession has the potential capabilities to render the people of California, and indeed the nation as a whole, a dedicated service and leadership in this vital matter.



The Light Fantastic

The 36th annual Spring Dance was a fine tribute to the efforts of Ray Crawford, Doug Grimes and other members of the Social Committee. Showing the effects of the long, hard winter, the engineers took their cocktails sitting down and there was not the usual pre-dinner melee. The buffet supper was excellent. In fact the comments received were so favorable that both Doug Grimes and Cam Royance of the Social Committee are feuding over credits.

It was nice to welcome back such old friends as the Jim Macdonalds who have moved back

to Winnipeg from Victoria and the Andy Koropatnicks who have returned from Grand Rapids (and we doubt that Mrs. K found that gorgeous gown in Grand Rapids). Council was well represented, with Vice-President Harland and Councillor Fowler setting a fine example by sending their wives flowers, although in both cases the deed could be considered one of gilding the lily. The Latin influence has obviously more than overtaken Lou Earp and he should soon be able to give dancing lessons himself. He may also soon have to go solo as it is doubtful anyone will be able to follow his intricate steps.

At midnight, life began for Craig Somerville, the orchestra played Happy Birthday and the ladies lined up to bring him their greetings. It had been decided to keep his age a secret, so only those persons who read the Free Press or Tribune will have a clue as to how old he really is.

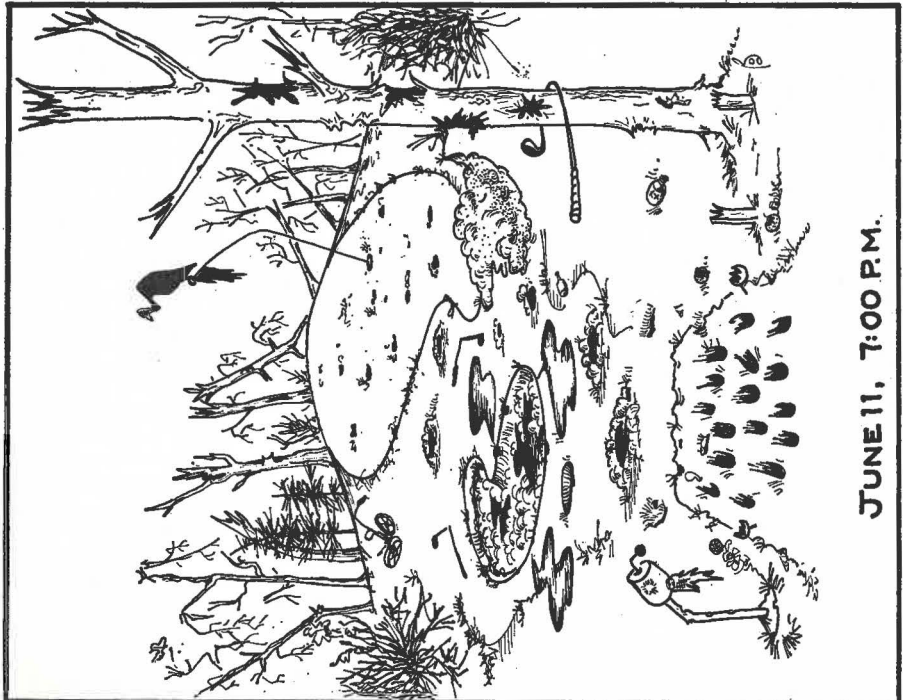
The rumour that Bill Isberg brought the baby sitter and left his wife at home is not true; the vision of youth on his arm was his wife. Managing Editor Whitfield attended with his pretty wife and both he and cub reporter Warrenner behaved more like ambassadors than newspapermen. The University was ably represented by Dean Hoogstraten and Professors Baracos, Leith, Mindess, Russell, McMath, Chant, Morris, MacDiarmid, Gawley.

It's easy to spot the couples who are not taking dancing lessons — they're just dancing, not stumbling and counting.

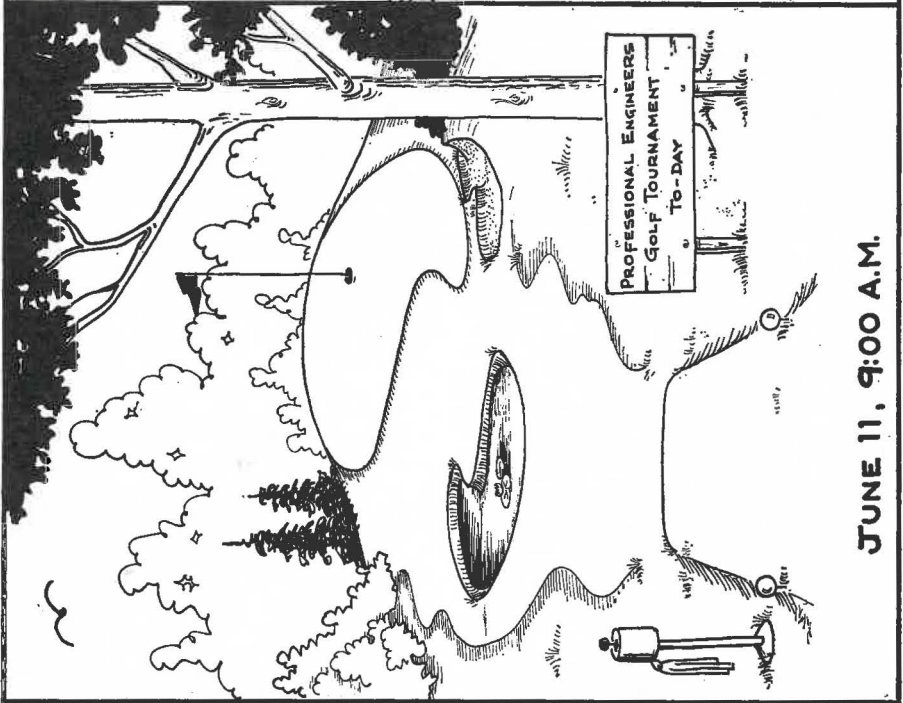
Unfortunately the Storeys left the ball before their theme song was played. Apparently it takes more than a broken ankle and a cast to keep Les Wardrop off the dance floor (and more than his wife's pleas to keep him off a barn roof). Regulars who attended included the ever effervescent Bill Lynn, debonair Nick Diakiw and Fred Hewitt who decided Ottawa was no place for an Irishman whose furniture was paid for so he hustled back to the West. Newcomers included the Gerry Langmans and the Walter Shanes.

The Advisory Committee, under the able direction of John Adam, is training some bright boys whose talents and ingenuity go far beyond the confines of the Committee. Both Jim Whenham and Bob McKnight attended the dance, checked their coats on arrival and subsequently turned the coat check in for a drink at the bar. The only problem was that they encountered a slight delay in retrieving their coats at the end of the evening — but they did have a free drink.

Those who stayed away missed a good party which might have been somewhat crowded had they turned out anyway.—M.K.



JUNE 11, 7:00 P.M.



JUNE 11, 9:00 A.M.

What's Right with the Image

Periodically concern is expressed about the image of the professional engineer in Manitoba. While it is possible that in some instances there may be something wrong with the image, there is also a very great deal that is right with it.

Certainly if a member makes disparaging remarks about his fellow engineers, is a professional fault finder, has no respect or tolerance for others and their views, attends Association meetings in a spirit of obstruction rather than co-operation, devotes all his spare time and money in pursuit of his own pleasure, it is understandable if he has and gives the impression that the image could be improved.

No image can be any better than the actual fact it represents. While we have little control over the news media which reflect the image of the professional engineer, no amount of fuzzy reporting can really disturb the basic fact of an engineer of character, ability and integrity.

During the Tritschler Commission Inquiry into the Manitoba Hydro Grand Rapids Water Haulage contracts, the public eye was focused on members of this Association — present and former members of our Council, gentlemen who are esteemed both within the profession and outside it. In spite of seeming efforts to becloud the issue and in spite of some questionable reporting, it must have been clear to all intelligent persons who followed the proceedings that Manitoba is being well served by these public servants. The professional engineer gained in stature during this Inquiry and this Association is fortunate to have members of this calibre to represent it to the public.

Engineering endeavours in this province are in the hands of the members of this Association and we could mention many outstanding engineering achievements. However, it doesn't behoove us to boast of these accomplishments. They speak for themselves, and after all, the public has a right to expect this profession to do its duty and to do it well. However, the contributions of members of this Association to the welfare of Manitoba go far beyond the realm of engineering and the call of duty. Many members of this Association are giving generously of their time and talents to a great variety of community affairs, only a few of which are set out in this article.

S. J. Borgford — Past Chairman of the Indian and Metis Conference, Director of the Manitoba Mortuary Society.

W. D. Hurst — Has served on the Board of Directors of the Winnipeg Symphony Orchestra for 6 years, was President for two years and is currently an Honorary Councillor.

J. Hoogstraten — Vice-President of the Royal Winnipeg Ballet.

J. W. Sanger — Board of Directors and Member of the Building Committee of Winnipeg Children's Hospital.

T. E. Storey — Past President Kiwanis Club of Winnipeg and current member of Welfare Board, former member of the John Howard and Elizabeth Fry Society.

G. A. Muir — Has been associated with the Cancer Society and is currently right-hand man to a Girl Guide Commissioner.

C. A. Antenbring — His many activities include the Board of Directors of the Builders Exchange and the St. James Parks Board.

W. L. Wardrop — Director of Community Services, Rotary Club.

J. R. Rettie — Board of Directors and Members of the Building Committee of Winnipeg Children's Hospital.

J. E. Whenham — Patron, Manitoba Theatre Centre.

C. Brownridge — Member Charleswood Council and Chairman of the Charleswood-Assiniboine Library.

D. R. Grimes — Member of Riverside Lion's Club.

G. A. Russell — Member of the Board of Directors of the Forum Art Institute and Production Manager of the Winnipeg Art Gallery Film Society.

J. D. Adam — Served 7 years as a member of the School Board of West St. Paul District No. 4, four years as Chairman of the Board; Vice-President of the Middlechurch Branch 167 of the Canadian Legion.

R. S. Williams — Shriner (President of Orchestral Unit). Director of the Advisory Committee of the Lion's Club Senior Citizens Home, has been awarded the Legion of Honour Degree by the Order of De Molay.

C. H. Templeton — Board of Directors and Chairman of the Building Committee, Winnipeg Children's Hospital; served for 3 years as President of the Community Planning Association, Manitoba Division.

C. S. Landon — Secretary-Treasurer of the Manitoba Good Roads Association.

J. W. Baldock, R. S. Bowman, F. C. Dempsey, G. P. Pearson, H. P. Stanley — Judges of the Manitoba Good Roads Association.

A. G. Moffatt — Director of Facilities Committee, Chairman, Practice Facilities Committee of the Pan-American Games Society, Member of the Board of Governors and Chairman of Building Extension Committee of St. John's College.

Space does not permit a longer list and has in fact forced us to limit the involvements of those we have listed.

It would, of course, be fatuous to suggest that there is no room for improvement. If we want to improve the image of the professional engineer, let us not embark on a course of trying to cajole the news media into extolling our virtues and lauding our accomplishments. Let us continue to provide the public with good sound engineering projects, and as individuals let us augment the ranks of those who are already making such an exemplary contribution to the welfare of Manitoba.

We have listed in this article only a few of the members of this Association who are making an estimable contribution not only to the profession but to the community, and we know there are many, many more. While some may feel there is cause for concern over the image of the professional engineer, we feel there is considerable justification for pride and gratification.—M.K.

MOVING?

PLEASE let us have your change of address.

Please fill this out and mail it to the Association office, 418 — 265 Portage Avenue, Winnipeg 2.

Name.....

Old Address.....

New Address.....

Council Meetings

March 10, 1965

Attending the Council meeting on March 10th were President Borgford, Past President Chappell, and Councillors McGinnis, Finnbo-gason, Russell, Sommerville and Fowler.

The accounts were passed and Council accepted one engineer-in-training, three transfers, five registrations and one reinstatement.

Council then heard a delegate from the Board of Examiners Committee regarding the new uniform Syllabus of Examinations proposed by the Canadian Council of Professional Engineers. Council voted to accept the proposed draft of the Syllabus with some reservations, in accordance with the recommendations of the Board of Examiners.

The General meeting regarding the revised fee schedule of consulting engineers was then discussed. It was decided that Council would present the new schedule at the meeting rather than have the consulting engineers committee members do it.

An appointment to the Technicians committee was then approved.

The final item on the agenda was a lengthy discussion concerning the terms of reference of the nominating committee.—R.M.S.

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March 17, 1965

Present at the meeting of March 17, 1965, were President Borgford, Past President Chappell, Acting Registrar Weber and Councillors Harland, Fowler and Russell.

The Council started by hearing Mr. A. Bell, the Chairman of the Public Relations Committee. Mr. Bell asked for direction from Council regarding the objectives of the committee. There was some discussion regarding the public image of the profession and the engineers' relationships with each other, especially those working for firms competing with each other. A report had been submitted to Council concerning the Public Relations Committee's understanding of the aims and objectives of the Association. They would like clarification of this from Council. This was sent by Council to the Advisory Committee. It was decided by Council that the terms of reference of the Public Relations Committee should be made up by the Public Relations Committee and sent to Council for consideration.

The report of the Advisory Committee on the Nominating Committee and scrutineers was received. It was decided that Council would set up the Nominating Committee for this year but in future some of the Nominating Committee would be appointed by Council and others would be elected at the annual general meeting.

An appointment to the Consulting Engineers Committee was then confirmed.

The terms of reference of the Membership Committee were approved after some discussion as to the division of responsibility between the Public Relations Committee and the Membership Committee.

A letter from the School Board concerning leaky roofs on new schools was then considered. Council decided to set up a committee to review specifications for roofing with the School Board architect.

Council finished by appointing a committee member from the Association to the committee on Metro's heating by-law.—R.M.S.

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April 8, 1965

Present at the Council meeting of April 8, 1965, were President Borgford, Vice-President Harland, Registrar Weber and Councillors Sommerville, Finnbogason, Russell, McGinnis, Rettie and Fowler.

Routine business was discussed during the first half of the meeting. The accounts were passed, four licences were granted, five transfers and seven registrations were approved.

The new fee schedule was then discussed. This schedule is to take effect May 1, 1965. It was decided that the new fee schedule and the code of ethics would be printed and distributed to anyone requiring them.

The council then interviewed an applicant for the position of permanent registrar.

The final item of business was a discussion of Bill 64, which has now received third reading in the Provincial Legislature. This Bill provides for the signing of a collective bargaining agreement between the Province and the Manitoba Government Employees Association. Although the Bill does contain a clause under which professional and other classes might be exempt, the Employees Association have stated that it is their intention to press for the inclusion of Engineers as well as the Rand formula for collection of dues.

Some members of the Association who are civil service employees have expressed concern at the undesirable position this would

place Professional Engineers in, in carrying out their services as employees of the Government. It was further pointed out that the inclusion of Professional Engineers would be contrary to the Labour Relations Act which exempts members of the engineering profession.

The following recommendations were made by Mr. Weber and approved by Council.

1. Bill 64 be referred to our solicitor for review.
2. That consideration be given to the request of members that appropriate steps be taken to inform the government of the undesirable position that professional engineers would be placed in if the request of the MGEA was agreed to.

—R.M.S.

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April 14, 1965

The Council meeting of April 14th was attended by President Borgford, Vice-President Harland and Councillors Sommerville, Russell, Finnbogason and Fowler.

Council decided to send a questionnaire out to the members in order to get information from which to prepare a list of consulting engineers practising in Manitoba.

The Public Relations Committee was discussed and a meeting was scheduled for April 22nd.

Council gave approval to the course in Mechanical Engineering at Waterloo and in Chemical Engineering at R.M.C.

Council accepted the recommendations of the Advisory Committee regarding the Nominating Committee and Scrutineers which will introduce reforms into the electoral system. In future the Nominating Committee will consist of 7 members including the two latest living past presidents, 3 members elected at the Annual Meeting and two Councillors appointed by Council. The Nominating Committee will require candidates to submit a short history and this list will be sent to the members well in advance of the Annual Meeting so that they may make further nominations if they so desire. If a Nominating Committee member is himself nominated he must withdraw from the Committee. The President and Registrar will not be considered as ex-officio members of this Committee. The new regulations governing Scrutineers establishes that no unauthorized person shall be present when the ballots are being counted.

The matter of the Code of Ethics was referred to the Advisory Committee for study

and the revisions to the Act were referred to a joint committee comprised of the members of the Advisory and Legislation Committees.

Council decided to defer a motion on the appointment of a Registrar until more Councillors were present. In the meantime Council resolved itself into a Committee of the whole to make a recommendation about the appointment for the next Council meeting.

The Union of Manitoba Municipalities asked that a member of the Association attend their District Meetings to explain the role of the consultant in this field and it was decided that Mr. Borgford and Mr. Fowler would look after this matter, and arrange for speakers.

—E.A.S.



April 21, 1965

Present at the meeting of April 21, 1965 were President Borgford, Vice-President Harland and Councillors Russell, Finnbogason, Chappell and Rettie.

Four engineers were appointed to the Certification Board and four to the Board of Examiners of the Engineering Technicians Society.

There was then an extensive discussion concerning the Association budget and the salary for the full-time Registrar. It was brought to the attention of Council that membership had declined by about 40 since the fee increase. Concern was expressed by some members that the Association would be unable to finance the salary of the Registrar should membership decrease any further. Mr. Rettie, Chairman of the Budget Committee, presented a statement dealing with finances and membership for Council's consideration and expressed concern over the decrease in membership and suggested maximum effort to increase membership and control expenditures with the expense of a full-time Registrar. Prof. Russell submitted a prepared statement in which he expressed the opinion that the approval given by the general membership to a raising of fees at the Special Meeting of September 14th, 1964, did not imply that a Registrar was to be obtained at any cost and did not confer on Council the right to enter deficit financing. He stated that if the position of Registrar could not be financed entirely from the fee increase, that the general membership should be notified to this effect and their wishes determined. It was, however, decided that the financing could be arranged and it was voted unanimously to begin negotiations with Council's choice for a full-time Registrar.

The Bill to incorporate engineers into the

Civil Service Collective Bargaining Agreement was considered. It was recommended by the Association solicitor that government engineers advise Council of their request that they be excluded from collective bargaining agreement and produce proof that this is the opinion of the majority of civil service engineers. If these engineers are in a majority, the solicitor is to be authorized to write a letter to the Manitoba Government requesting that engineers be excluded.

The agenda of Canadian Council was then discussed. This agenda was approved after some discussion concerning the ethics of engineering design competitions.—R.M.S.



Flin Flon News

By M. N. COLLISON, P. Eng.

J. R. Bray, P. Eng., along with Mrs. Bray, using the CNR's commendable facilities, attended the recent C.I.M. Convention in Toronto. According to Bob, the convention was a big success, but I have been unable to obtain his wife's comments. Bob's description of the event leads one to wonder whether he enjoyed the train ride more than the convention.

L. W. Ogryzlo, P. Eng., and Mrs. Ogryzlo also attended the C.I.M. Convention and, while in Toronto, spent some time looking for a place in which to live since they are expecting to be moving early this summer.

G. H. Kent, P. Eng., and Mrs. Kent, spent a week at Easter in Winnipeg visiting friends and relatives and doing some shopping. George reports that he watched several N.H.L. play-off hockey games on the nights of their occurrence which, he claims, is much better than seeing them a week later.

W. A. Morrice, P. Eng., and Mrs. Morrice spent a few days in Toronto late in April attending the Annual Stockholders Meeting of the Hudson Bay Mining and Smelting Co., Limited. The big news from this meeting is the fact that Hudson Bay Mining and Smelting is now entering the die casting business.



USE OF SEAL

Section 19 of The Engineering Profession Act reads as follows:

Every person registered under this Act shall have a seal, the impression of which shall contain the name of the engineer and the words "Registered Engineer, Province of Manitoba," with which all estimates, specifications, reports, working drawings, plans and other documents issued from his hand shall be sealed.

So You Want to be President

By MARVIN KLEE

It looks like a nice set-up. There is an aura of dignity about it, a certain amount of prestige. "This is the President speaking," has a nice ring to it. Then there are the meetings where the President presides with a certain amount of deference, no one being recognized or allowed to speak without his permission (or so it says in the rule book). There are dances — two a year. The President and his party have a place of honor and with social aplomb the President welcomes the guests. There are a few Council meetings where the President reigns like a benevolent monarch, and a visit or two to the other Associations to be a head table guest and bring greetings from Manitoba. During the year he would, of course, be called upon from time to time to disseminate information or express opinions on lofty subjects. Nothing to that. Just a little homework. The President is invited to represent the Association at local meetings and social functions of other organizations, where he can smile benignly and look wise, dignified and cultured — the perfect image of his profession; all the virtues of the engineer manifested in him. Yes, it all sounds very grand. So you decide to head for the top. Someone must be President and it might as well be you.

First you must be elected to Council. That shouldn't pose too big a problem, particularly if you work in a large organization, are an active member of the alumni association and have done a little committee work. The next step on the ladder is to be elected vice-president. Once that is accomplished, it's almost in the bag. You begin to rehearse your acceptance speech. None of this trite "First of all I want to thank you for the honor you have bestowed on me and to say how humble I feel." No sir. You are going to come up with something original, thought-provoking, urbane, sophisticated. Yup. This is going to be your year — a year of progress and achievement, fresh ideas, inspiration.

The big moment finally arrives. It is annual meeting time and you have been elected President. The Past President is addressing the gathering, saying his farewells before he passes the reins on to you. "It's been a privilege and a pleasure to have served you," he is saying. Very hackneyed. Finally your moment arrives. You reach for the microphone. What's wrong with your knees? They feel like jelly. You clutch the mike for support and you utter a debonair "Uh." Your voice is squeaking. You

try again. "Uh, uh, I just want to thank you for the honor you have bestowed on me, uh, and uh, to say how humble I feel, uh and uh, I promise to undertake my duties as uh your uh President with the uttermost uh uh utmost of my ability. Uh uh. Thank you." Fouled that up didn't you? Oh well, no worse than your predecessors. At least not much worse.

Now to forge ahead with your plans, your new horizons. Call an Executive Committee meeting immediately. Get the other committees rolling. Maybe we should have new quarters. Action, that's what we need. It's strange how busy people are, especially in December. It's not quite as easy as it sounds to get meetings organized. Some of the committees even appear to have the idea that they know how to run their affairs without your assistance and guidance.

The agenda of the first Council meeting is so heavy you have to spend hours preparing in advance. So much time is consumed on registrations, licences, correspondence, Canadian Council matters of a national nature, a study of the syllabus of examinations, the budget, etc., etc., that Council has no time to consider all the bright innovations you have in mind.

Council meeting follows Executive Committee meeting follows Council meeting. New problems arise; old problems reappear. By the end of January you have attended 16 meetings. It takes a minimum of 5 hours a week just to digest all the material that comes to your attention. Council agendas are heavy — the purchase of securities, consideration of life memberships, insurance, accreditation of foreign universities, appointment of representatives to various local committees, registrations, examination regulations. You've been far too busy to spend much time thinking about your new horizons — but the year is young yet.

As you don your dinner jacket before the annual dance, you rehearse the little speech you will give when the Chairman of the Social Committee introduces you, the President. When the moment comes you stride confidently to the microphone. Your speech is well rehearsed. Even your wife has sanctioned it. "Ladies and Gentlemen," you begin. "It is my pleasure to welcome you here tonight." (Light applause). Those engineers shouldn't head for the bar in the midst of your speech. Maybe they think it's over. The noise level in the

room intensifies. It looks as if your speech is over — no one is paying attention. You smile sheepishly and return to your table.

By the time you pack your bag to head out to represent Manitoba at a sister Association annual meeting, the Walter Mitty in you is somewhat subdued. You don't picture yourself in the role of visiting ambassador being treated deferentially. You just plan to be an attentive spectator, a sort of visiting elder statesman. Everything would have been all right too, the illusion might have been maintained, if that fellow at the meeting hadn't asked if geologists were required to stamp preliminary reports in Manitoba before they could be filed with the Department of Mines and the Chairman hadn't asked you to explain Manitoba's position with regard to incorporation and limited liability as they affect consulting engineers incorporated in other provinces and wishing to practise in Manitoba, or did he ask if a company incorporated in Manitoba and wishing to do business outside Manitoba, was required to have registered engineers... oh what the heck. A person couldn't be expected to have all the answers at his fingertips.

More Council meetings, the Annual Meeting of Canadian Council. You can't take your holidays in June, there's too much to do. You can't take them in July or August. By the end of August you have attended 63 meetings. Public relations, membership, a speech to students at the University, a study of expenses in relation to budget, consultation, correspondence. You wish you had taken a course in Journalism. You are requested to submit a few words for inclusion in the student publication, "The Slide Rule", to write an article for each issue of *The Manitoba Professional Engineer*; a letter of inspiration and challenge must be sent to all the graduates in engineering at the University. There are innumerable speeches.

The files you have accumulated weigh 7½ pounds. It takes 4-5 hours a week just to keep abreast of routine business. You know now that this isn't going to be the biggest year in the history of the Association and you aren't going to be recorded as a president of progress and vision. You are so bogged down with routine matters you can't even remember what your brave new horizons were all about. Tilting at windmills is for young adventurers anyway. You've decided that middle-aged executives should be content with seeing a job well done.

October and November. A problem of ethics. A reported infraction of the Act. Consultation with the solicitor. Nineteen meetings since the end of August. Annual meeting arrangements. Guest speaker. Agenda. Committee re-

ports and your own report. Auditors' statement. Details, details, details.

The day of the Annual Meeting dawns. Walter Mitty did not last past August. You've been too busy for dreams. In spite of all your efforts and those of the members of Council who have worked with you, there are no brave new achievements to boast of and you know that most members will think little has been accomplished since the last annual meeting. You know you will have to face all those members, your palms will be moist, you will probably stammer, the hecklers may have some sport at your expense; there seem to be hundreds of details to keep in mind. You feel you have been barely adequate for the job, you haven't accomplished any miracles and in the history of the Association it will be just another year. You are older and wiser and tired and you hope you won't forget to get a second to all the motions. You'll start your remarks with "Gentlemen, it's been my privilege to serve as your President..." You know it's trite but it's sincere, and who are you to try to say it any better way?

You have not been the giant you envisioned, the leader of men. You've just been a human being after all, with all the frailties and foibles of your predecessors and maybe just a few more.

It is with a mixture of relief and sympathy that you pass the torch to your successor, and as he starts his acceptance speech with, "I want to thank you for the honor you have bestowed..." you step quietly and gratefully into oblivion.

What you may not realize, Mr. Past President, is that just by attending diligently to the routine business, by doing the dull necessary chores by putting in tedious hours on problems and details, by representing this Association with dignity, you have been an extraordinary president and have contributed distinguished service to the Association. Although the visionary dreams of progress and prestige were drowned in a sea of ordinary detail, the odd part is that you have been of much greater stature than you envisioned at the outset.



In the December, 1956, issue of this publication, there appeared a picture of Miss Wendy Woods, who was the Engineering Freshie Queen. Miss Woods was the first engineering student to be Queen of the faculty and she later became its first girl graduate. It was with deep regret that we learned of her tragic death in a car accident this Spring.