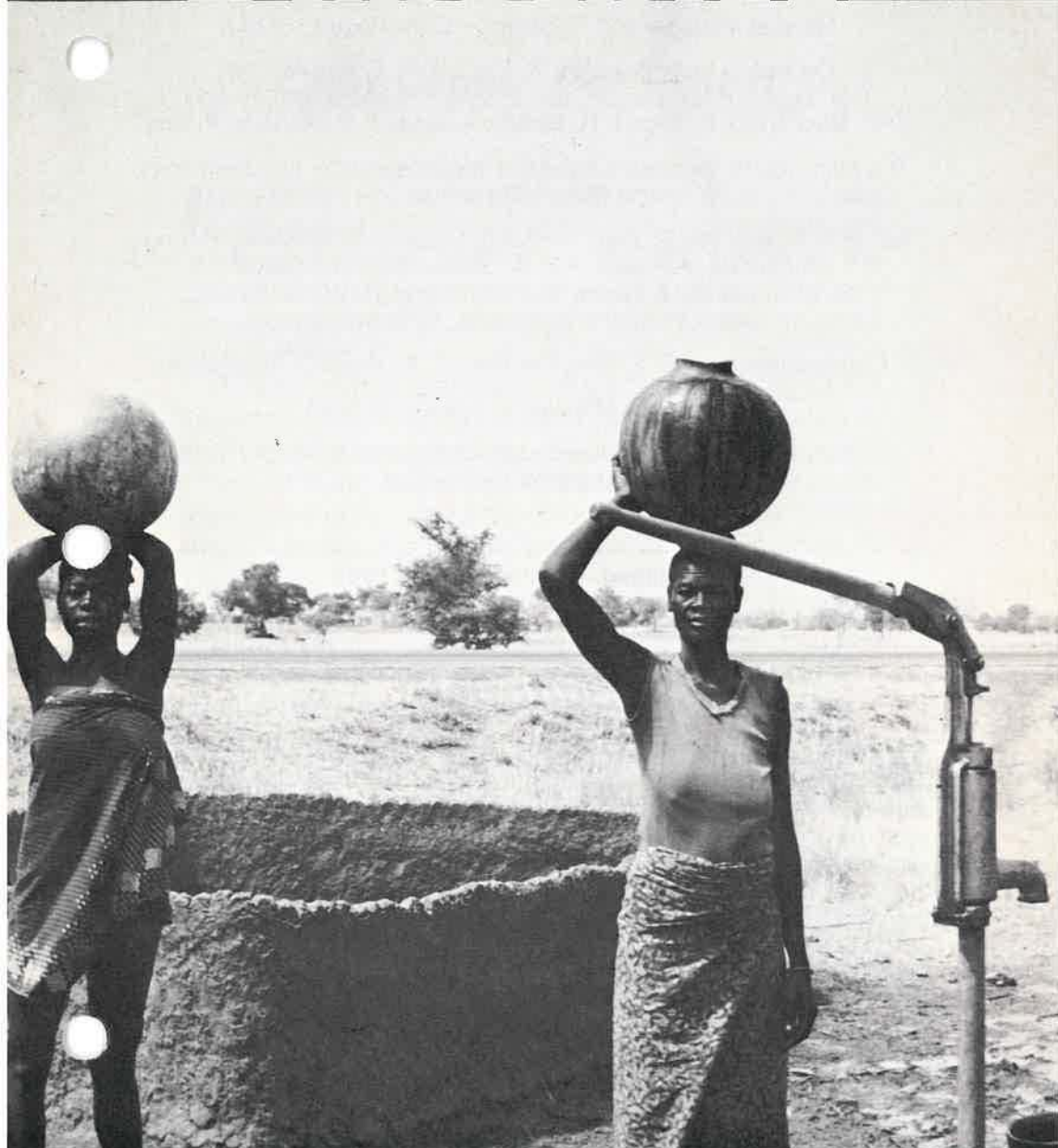

The Manitoba Professional Engineer

April
bulletin 83



"Transferring Appropriate Technology. Helping People Help Themselves",
Upper Region Rural Water Supply Program, Ghana.
Project Management and Engineering by W.L. Wardrop & Associates Ltd.

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*Opinions expressed are not necessarily those held by the A.P.E.M. or
the Council of the A.P.E.M.*

Winnipeg, Manitoba, April, 1983

Editorial

With this issue the Bulletin adopts a new format. The enigmatic cover, adopted in 1976 as a result of a contest, has taken its place in our archives. It will be replaced by covers relating to engineering projects undertaken by our members. We solicit the assistance of members in supplying us with interesting pictures. Pictures may be black and white or coloured, with the shape preferably corresponding to that of the Bulletin (greater in length than width.)

The Bulletin has been published on a regular basis since the first issue appeared in July 1956, shortly after the office was opened during the presidency of Jack Hoogstraten. We have tried to inform, interest, provoke, stimulate and amuse. Editors since 1956 have been G. T. Christie, W. H. Dickins, W. J. Adams, R. C. Sommerville, J. C. Gillespie, I. W. Thomas, C. R. McBain, G. R. Kirk, B. Whitfield, W. R. McQuade, W. R. Newton, R. M. Stokes, E. A. Speers, J. W. J. Lewis, K. M. Jardine, R. A. Kane.

While no publication can be all things to all people, we hope that each of you will find something of interest in every issue. We welcome your comments, particularly in the form of letters to the editor.

President's Message

Chef Cross' Pot Pourri

By D. E. Cross, P. Eng.

Isometimes wonder when I write these 'epistles' if any one reads them. Now I know. I've received several letters and phone calls about my last article in the Bulletin. Members are concerned about licensing procedures between provinces and the bureaucratic red tape involved.

My attendance at the annual general meeting of the Saskatchewan Association of Professional Engineers in Saskatoon was interesting. A panel discussion composed of three respected members of the Saskatchewan community urged the profession to show leadership. "Unless the professionalism of the Engineer is transferred to society — a willingness to take responsibility and stand by what is done — then Canada will continue on the road to mediocrity". These thoughts struck home as they reinforced my ideas outlined in a number of releases to the news media . . . the importance of the Professional Engineer in today's economy.

Social occasions at conferences allow delegates to unwind and to share common concerns. I thoroughly enjoyed the dinner and dance on Friday evening — in spite of the fact that my wife was not able to accompany me to Saskatoon.

On March 19th I attended the Certified Engineering Technicians' Annual General Meeting. Meetings of this type allow the profession to maintain a Manitoba dialogue with the technicians.

Another pleasant part of my duties as A.P.E.M. president was to attend the engineering grads' farewell on March 26th. Can it really be twenty-two years since I donned a tuxedo and danced the night away. Now we who graduated in the 60's are looked upon as experts

— how time flies. I remember the excitement, the dreaded approach of final exams and the rumors about job interviews.

Today's graduates have the same hopes and aspirations. Many fear for the future as a slow economy presents fewer job opportunities

and increased competition for positions. In my opinion, the economy will pick up, and these eager young engineers will be able to find employment and thus be able to contribute as engineers to the economic advancement of Manitoba and Canada.

Times Don't Change

In April 1971 we ran an article by the renowned columnist J.W.J.L. which is as valid today as it was then, except that, unfortunately, the number of professional engineers in government has dropped by 66%. We are reproducing this article today in the hope that professional engineers will heed the call either to offer their services politically, or failing that to offer their advice.

"It is axiomatic though not flattering that we get the government we deserve. Surely the common sense index of a random sample of the population is higher than that of the unholy alliance of lawyers, undertakers and moonlighting college professors who grace our provincial and federal legislatures. The vector sum of the efforts of these legislative bodies has been characterized as equivalent to the productivity of a committee of architects.

"People in beer parlours have greater world problem solving ability than people in legislatures. One school of thought would adjourn the legislators to the beer parlour. Another possibility is to upgrade the legislators. At present less than two percent of members of our provincial parliament are engineers. Why not more?

"An engineer provides an objective balance between philosophers

with exotic theories on how to run other people's lives and the professional politicians for whom a debate on fuddle duddle represents the highest level of parliamentary action. Not all engineers are suitable or available for public life. For example, engineers who are civil servants who work are barred from politics, whereas civil servants who teach are welcome to try politics as a sideline.

"The province would benefit from more engineers in politics. How about you?"

New Members

L. M. Borowski; N. D. MacAlpine; T. L. Schaffnit; J. L. Cluett; R. Clarke; M. Hawrylak; W. M. Kinsner; E. J. Sikora; R. J. Smegal; R. S. Whitmore; L. D. Barker; G. A. Collis; G. M. Omichinski; G. T. Peters; N. P. Catillo Montecinos; J. G. M. Desjardins; W. Jaster; M. G. Kushliak; J. G. Ritter; L. D. Serrano; N. B. Szaura; A. S. Wojcik; V. N. Shkawrytko; R. C. Thingstad.

Engineering Graduates Enrolled

G. F. Shymko; M. A. Windeatt; D. A. Kiely; A. D. McFee; T. L. Holden; N. J. Kelly.

Council Meeting

February 14, 1983

Council began the meeting by cleaning up some old business surrounding a meeting held with the Manitoba Telephone System about the Yellow Pages. Basically M.T.S. was sympathetic but unfortunately not much could be done to deal with each item of contention to the full satisfaction of the A.P.E.M. We will have to take action after the fact.

The licences, engineering graduates, transfers, etc. were passed with nothing substantive to report on.

Council then dealt with the minutes from the Executive Committee's Meeting. Of great concern to the Council as a whole is how the Executive Committee relates to Council. Should Council simply ratify Executive action or does the Executive require authorization from Council before it can act? What if Executive action fails to get Council's approval, should it resign? You can see that this is a very difficult conundrum and much more debate will be forthcoming.

C.C.P.E. asked the A.P.E.M. to send a delegate at A.P.E.M.'s expense to attend a conference on engineering education. Since no money is included in the budget Council tried to find a name of someone who would be in the Ottawa area on their own who could attend. Since no names came up it would seem no Manitoba represen-

tative will be attending.

C.C.P.E. is sponsoring a conference of all the Registrars to discuss Immigrant Engineers. The attendance of O.A. Rogers was ratified with a comment that C.C.P.E. continues to be out of touch. In these tough times why would they be wanting to spend extra money on an issue which does not seem too pressing given that many Canadian engineers currently are unemployed, let alone bringing in more immigrant engineers.

Bob Foster and Ben Rogers are to attend the Manitoba school symposium to represent the Profession of Engineering.

A letter from a member who had some interesting proposals for giving experience to recent engineering graduates without work was accepted, but no further action is immediately planned.

The Annual General Meeting Committee gave a report to Council with a proposed new format for this year's meeting. After much discussion it was moved that this report be returned for further study since Council feels the recommendations were not substantiated with enough analysis.

That C.C.P.E. is more than an insurance policy for one member is evidenced by a letter written by George De Pauw to Council. He does not see too much good in it

and does not mind saying so. Nevertheless Council simply accepted his letter as information.

Along the C.C.P.E. lines a letter will be sent by President Dave Cross expressing the A.P.E.M.'s displeasure at the cavalier attitude of C.C.P.E. whose actions give the appearance of total separation from the realities of the times we live in.

The second quarter statement was circulated and without going into detail everything is tracking along according to plan. The biggest problem for Council was how to handle this and with only one strong objection they chose to ratify the statement.

It appears as though something positive is about to happen on a long outstanding item, revision of the Engineers Act. A couple of years ago the whole Act was reviewed and proposals made to make it more up to date. Mr. Russell Doern who is to meet with Dave Cross, Fred Jost and O.A. Rogers will present the revisions as a private member's bill.

A request for a donation to the National Building Code Committee was turned down and on this note Council went home.

R.A.K.

March 14, 1983

By R. A. Kane, P. Eng.

The Council of the Association of Professional Engineers gathered together in the boardroom at 3:30 p.m. The usual fare passed through with a few questions, no objections or changes so what it all meant was that the Agenda was approved. Minutes of February 14 approved as well as licences, engineering graduates, transfers, registrations, and the accounts.

Council then swung into the balance of the items on the Agenda. First thing to be discussed was some proposed legal action surrounding two separate matters. Council authorized that legal actions be proceeded with against two firms in apparent contravention of the Engineering Profession Act. One of them signed an engineering document when they were not licensed in the Province of Manitoba. Investigation indicated that in one case of the two signatures only one is regis-

tered anywhere and that one not in Manitoba yet both put P.Eng. with their names. In the other case they have no registered engineers on staff hence are acting illegally.

In 1979 the Legislation Committee, at the request of Council, began a study of revisions to the Engineering Profession Act. Council has approved the proposed changes and they are now ready to be piloted through the Manitoba Legislature. Russell Doern, M.L.A. will submit the amendments to the Act to the Legislature as a private member's bill. An article appears elsewhere in this issue outlining some of the major changes that are proposed.

A final draft from the Committee on the Review of Committees detailing their final proposed terms of reference for the standing committees of the A.P.E.M. was presented. A motion accepting the report with thanks and a call for a special

meeting of Council to finalize the actions proposed was passed.

Council approved of plans to have a reception for members of the graduating engineering class of the University of Manitoba. The budget allows \$1,000.00 for this reception. However, there very likely will be a cost overrun based upon the projected figures. The reception was held Tuesday, March 15th.

Council reviewed a letter from a member of the A.P.E.M. who felt that unfair licensing requirements were in force when he applied to a U.S. group. Investigation revealed that his experience was not discriminatory and Council charged the Registrar to respond to the member accordingly.

The Annual General Meeting Committee made another report to Council about some proposed changes in format. The major issue is whether or not a formal dance should be held on Friday night. The A.G.M. Committee thinks it is a losing proposition and Council feels it can be resurrected. Bob Foster will spearhead a movement to try and breathe new life into this event which has been held annually since 1974.

Ben Rogers reported on his February 16 trip to Ottawa for a Workshop on Assessment of Immigrant Engineers. The general thrust of his report reinforced Council's previous feelings that this did not require a special meeting status and the proposal of Immigrant Engineers to practise in a particular constituency was deemed impractical.

There is a committee with the Provincial Government to study the effects of asbestos. The current member is to be contacted to see if he wishes to continue and if not a suitable replacement is to be picked

as the A.P.E.M. representative to this committee.

Fred Jost was appointed to attend the Microelectronics Conference and Exhibition (Miconex '83) as the A.P.E.M. delegate to review the program and provide any necessary input.

Council decided to formally drop the Mentor program. In doing so a letter is to be sent to those people currently in the program (but on hold) and their employers as to their respective positions. Many draft letters were batted around with the final conclusion being that the Registrar and President would put their literary heads together to clean up the wording according to the thoughts tossed around the table. It concluded with an obvious extension to this theme that all the engineering graduates be informed of the particular status of the probationary period after graduation and what they can or can not do in an engineering capacity.



Gary Dare and Honorary Life Member J.L. Charles at the reception for the 1983 graduates in engineering. Gary Dare won the Canada Northlands Development Award, established by Major Charles and the late Mrs. Charles in memory of their son who was killed during World War II.

The Engineering Profession Act Basic Facts

By F. A. Jost, P. Eng.

The Engineering Profession Act was proclaimed by statute of the Legislature in 1920 based on the principles of self-regulation.

The rationale for the granting of statutory self-regulatory power is protection of the public interest. For this purpose the Association must supervise the professional practice of its members.

In order that the public may be served and protected the Association shall:

- a) regulate the practice of its members in accordance with this Act and the regulations, by-laws and resolutions of the association;
- b) establish, maintain and develop standards of qualification and practice for the professional practice of its members;
- c) establish, maintain and develop standards of professional ethics among its members, and
- d) administer the Act of the Association and perform such other duties and exercise such powers as are imposed or conferred on the Association by or under the Act.

The Association of Professional Engineers in the Province of Manitoba was incorporated by special act of the Provincial Legislature to administer the terms of "The Engineering Profession Act".

The following excerpts were obtained from:

- The Report on the legal status of professionals in Manitoba, and,
- The Report of the Professional Organizations Committee to the Ontario Law Reform Commission.

Criteria for incorporation

To determine if a professional association should or should not be incorporated, account shall be taken particularly of the following factors:

- 1) the knowledge required to engage in the activities of the persons who would be governed by the association which it is proposed to incorporate;
- 2) the degree of independence enjoyed by the persons who would be members of the association in engaging in the activities concerned, and the difficulty which persons not having the same training and qualifications would have in assessing those activities;
- 3) the confidential nature of the relationship between such persons and those having recourse to their services, by reason of the fiduciary relationship which the latter may be required to place in them, particularly because such persons provide them with care or administer their property;
- 4) the gravity of the prejudice or damage which might be sustained by those who have recourse to the services of such persons because of their competence or integrity was not adequately regulated.

The criteria listed in the above paragraph are intended to provide guidelines to be considered in making a determination with respect to granting legislation to such occupational groups. These criteria suggest that such status should be limited

only to those groups that provide services that include activities requiring a high degree of knowledge and skill exercised without supervision and usually with independence of judgment and of a confidential nature whereby the person must place special trust in the professional supplying the service. The primary reason for granting such status is protection of the public interest. Under the Act which incorporates an association, the association may be granted exclusive right to practise or the right to reservation of title.

Exclusive right to practise

The members of an association shall not be granted the exclusive right to practise a profession except by an Act. That right may be granted to an association where the acts done by the members are of such a nature that for the protection of the public they cannot be done by persons not having the training and qualifications nor be bound by a code of ethics required from members of the association.

Reserve of Title

The members of a professional association, may on application, be granted the right to reservation of title by incorporation in accordance with the provisions of the Act where it is necessary for the protection of the public to grant such right to reserve of title.

Given a setting where the Legislature has bestowed valuable rights on professional regulatory bodies, the principle of public accountability acquires great importance. It is a fundamental principle of our political system that those who make policy decisions ought to be held accountable to those who are affected by their decisions. In operational terms, the principle of public accountability

must be honoured at three levels: as between a professional governing council and the members of the profession; as between a professional governing council and the government, both Cabinet and Legislature; and as between Cabinet and the Legislature.

It is especially appropriate to expound upon the principle of public accountability in the context of licensing bodies, which by statute confer the most valuable rights to their membership. This principle calls for statutory recognition of the licensing body, and for statutory provisions outlining the relationship that shall exist between the licensing body and its membership. In particular, members who disagree with the decisions of the licensing body must have apparent and available avenues to seek redress. So as not to overburden the legislative process, the principle of accountability indicates that the regulations promulgated by a licensing body should be subject to Lieutenant Governor in Council approval, thereby retaining a link to the Legislature to which Cabinet is itself responsible. As a further means of ensuring that licensing bodies will be responsive to broad public interests, accountability invites the stipulation that the Lieutenant Governor in Council has the authority to appoint a certain number of individuals to the governing council of the licensing body.

(Councillor Jost has served on the Legislation Committee since 1976.)

Amendments To The Act

In January 1979 Council referred the matter of amendments to the Engineering Profession Act to the

See Amendments page 12

In 1973 we published A Concise Analysis of Engineers As They See Each Other (as reproduced in this issue.) In over a quarter of a century of publishing the Bulletin, this Analysis was the most sought after for reproduction by other engineering organizations — more, in fact than the total of all other reprintings. We have brought the analysis up to date. Readers will note there are many changes — in some areas. Things are perceived to be very much the same in the ivory tower, but quite different elsewhere.

A CONCISE ANALYSIS OF ENGINEERS AS THEY SEE EACH OTHER IN GOOD TIMES — 1973

	He Works	His Hobbies Are	His Attire Is	He's Friendly With	Politically He Is	He Hopes His Image Is That He Is	His Image Actually Is That He Is
Sales Engineer	In cocktail Lounges & on Golf Courses	Entertaining	Very mod	Everyone	Liberal or P.C. or Both	Honest & Sincere	A swinger & an apple polisher
Consultants	16 hours a day	Joining clubs	Conservatively mod	Everyone but other Consultants	Liberal or P.C.	Public Spirited	Rich and Snooty
Academics	For a few hours a week, 7 months a year with frequent sabbaticals	Moonlighting	Wrinkled	Other Academics	N.D.P.	Wise and Learned	Impractical & dull
Civil Servants	When the boss Is Looking	Sports	Out of Date	His dog	Undeclared	Hard Working & Dedicated	More Red Tape
Contractors	All summer	Reading Playboy	Sporty	Civil Servants	Lib. or P.C.	Honest & Reliable	Good at swearing
Industry	Hard and Regularly	Calling his broker	Double breasted blue serge	Chamber of Commerce types	P.C.	A champion of free enterprise	A corporate welfare bum

A CONCISE ANALYSIS OF ENGINEERS AS THEY SEE EACH OTHER IN BAD TIMES — 1983

	He Works	His Hobbies Are	His Attire Is	He's Friendly With	Politically He Is	He Hopes His Image Is That He Is	His Image Actually Is That He Is
Sales Engineer	In waist-high water	Draining swamps	Shredded up to the waist	Everyone except his wife	Accommodating	Self-Assured	Frantic
Consultants	He would like to	Doodling	Frayed	Everyone	Liberal, P.C. N.D.P.	Surviving	Poor and worried
Academics	Serenely	Building ivory towers	Wrinkled	Other academics	N.D.P.	Wise and learned	Secure, impractical, dull
Civil Servants	Casually	Breeding alligators	Out of date	No one and Everyone	N.D.P.	Public-spirited	Self-serving
Contractors	At building swamps	Shopping for a second-hand Toyota	Worn	Anyone	Frustrated	Honest and reliable	Unemployed
Industry	Hard and irregularly	Encouraging his wife to get a job	Shiny double-breasted blue serge	People he met at clubs he once belonged to	Baffled	A bulwark of free enterprise	A potential welfare candidate
Geologists	Intermittently	His rock collection	Worn parkas & boots	His rocks	Indifferent	Still around	Searching for material for more stockpiles

AMENDMENTS — *continued*

Legislation Committee. The Committee conducted an intense, detailed study of the Act in a period of over two years, and presented its report to Council in the Spring of 1981. Council studied the proposed amendments, sent them to the Association's solicitor for his comments and has now referred the matter to the Legislature. The amendments must be submitted as a private member's bill, and Russell Doern, M.L.A. has agreed to pilot the new Act through the Legislature.

The main changes concern appointing lay members to our Council

(something most of the other professional associations have already done), making provisions for the discipline of licencees, including reference to a code of ethics, changing the seal to read 'Registered Professional Engineer,' clarification of admission requirements to meet present standards, powers of Council regarding holding of property and investments.

Copies of the proposed changes are available in the Association office. Members who wish to scrutinize the changes, and the reasons for them, may obtain a copy by contacting the office.

Notes Gleaned From C.C.P.E. Releases

The federal government should target its research grants to meet export and domestic needs and industry should be better represented on government research committees.

The unemployment of engineers is at its highest in the last 25 years. There is little evidence that we can expect any dramatic improvement in the next few months.



The first logo (1957) had eleven chevrons, which has now been changed to 12 reflecting the joining of the Association of Professional Engineers, Geologists and Geophysicists of the Northwest Territories (1980) to the other provincial and territorial member associations.

Stuart Smith, Chairman of the Science Council of Canada: "There

is no good explanation for the recession and no one knows where the demand will come from to fuel the upturn in the economy..." "Smokestack industries will only recover a certain amount and they will not bring more growth and employment." "There is no consensus in Canada on the need and amount of new technology — , observing that universities and industry act like strangers to one another."

On the subject of women; in science and mathematics, girls are opting out four times the rate of boys — we must encourage women to be engineers and scientists and be involved in science and technology — Canada is wasting half its brainpower.

We regret to record the deaths of J. Blenkiron, P. Eng. and J. Desmond Russell, P. Eng.

Professional Development: Your Problem or Your Association's?

Just how is the professional engineer coping with today's rapid pace of technological change? What should the Association be doing, if anything, to assist individual members to maintain professional competence?

With these questions in mind Council in February 1982 established the Ad Hoc Committee on Continuing Competence. This committee then spent three months reviewing experiments and programs in other jurisdictions varying from the voluntary continuing education program for Engineers' and Foresters at U.B.C. to the mandatory scheme administered by the Iowa State Board of Engineering Examiners.

The Ad Hoc Committee's subsequent report led, in May 1982, to Council's agreement "in principle to embark on a program of *voluntary* upgrading of members' competence." To this end, Council also approved the formation of a permanent "Continuing Education Committee."

The permanent committee, realizing that "competence" is a nebulous and controversial term, has concentrated its attention on *professional development activities*, of which continuing education programs are the most visible form. Other updating activities that are being considered include attendance at industry and company seminars, home study, reading of technical journals, and membership in technical societies.

The Committee is in the process of finalizing a plan of action which, in its earliest stages, calls for input

from the membership on the topic of professional development. The extent and constructiveness of your response will be crucial to the successful implementation of the voluntary program which Council has endorsed.

*John H. Bachmann, P. Eng.
Chairman
Continuing Education Committee*

Courses

A course on Management of Research and Development is being offered at the University of Manitoba. For details contact Prof. Coppinger at 474-9921.

For information on a course at York University on Waste Management Facilities contact Audrey Armour at 416-667-3011.

The Petroleum Society of the Canadian Institute of Mining and Metallurgy will hold a technical meeting May 10 to 13. For details contact John Frank, 730-700-4th Ave. S.W., Calgary.

For details on the E.I.C. congress April 25-27 contact P.O. Box 9038, Saint-Foy, Quebec.

For information on short courses held May 31-June 1 by the Canadian Society for Civil Engineering, contact Michael Allen, P.O. Box 795, Station 'B', Ottawa.

For information on an Energy, Mines and Resources Canada workshop on Biomass as an alternative energy source to be held in Winnipeg on May 12, 1983, contact 401, 294 Alberta St., Ottawa, K1P 6E6, (613) 235-1363.

Thompson News

By B. E. Maxfield, P. Eng.

As it has been over a year since my last column, some of this "news" isn't.

In my last column I wrote "Hopefully 1982 will bring a turnaround". Well it didn't. On the nickel industry barometer, with a scale of 1 to 10, 1982 was a ZERO! The bottom dropped out of the market driving the nickel price down until the L.M.E. price hit a low of less than \$1.50 per pound in November 1982. Producers, facing large inventories, low demand, and prices below the operating cost of production were forced to take drastic steps to survive.

Production level reductions and plant shutdowns have occurred throughout the industry. Inco's Ontario operation has been largely shut down since June 1982 and is scheduled to resume production in April 1983. At Thompson, we had a three month production shutdown from November 1, 1982 to January 28, 1983. We are currently working a four day week until a scheduled four-week-vacation shutdown starting July 11, 1983.

Production cutbacks have resulted in reduction of inventory levels and with recent L.M.E. nickel prices in the \$2+ range, there is cautious optimism that the worst is behind us. However, there is still a long way to go.

One unfortunate side effect of this situation was the necessity to defer the development of Inco's Thompson Open Pit project. The dredge and dredging facility were erected but all further work was postponed until at least late 1983.

This winter, in contrast to

Southern Manitoba, we have had a snowfall well above normal. It seemed that almost every day during the shutdown there was snow to be shovelled. The banks along drives and roads are reaching record heights and still it keeps coming. It's too bad we can't average it across the province.

In May 1982, John Fulton and Blake Maxfield exchanged jobs. John is now Chief Engineer of the Manitoba Division and Blake is Maintenance Superintendent (Mines and Mill). Richard Wisniewski, Senior Mechanical Engineer, left Inco and Thompson in late 1982 for Suncor in Fort McMurray. He graduated from the University of Manitoba in 1974. Charlie Boyd, Senior Civil Engineer, left Inco but NOT Thompson, in the Fall of 1982. He is now employed by the Manitoba Department of Northern Affairs, Technical Services.

I close this article with a request to Engineers in Thompson to forward news, comments or ideas to me for future articles. Phone 667-5387 (business) or 677-3766 (home).

Licences Issued

R. Walker (Ont.); H. Ahmad (Ont.); A. A. Aziz (Alta.); R. A. Baynit (Ont.); G. F. Bourassa (Sask.); C. Fung (Ont.); S. H. Gebler (Ill.); J. Kirwen (B.C.); R. B. Ling (Ont.); K. J. Linton (Ont.); C. S. Seaby (Ont.); P. G. Stipanitz (Ont.); N. M. Engelman (Que.); D. C. English (Alta.); S. W. Hagemoen (B.C.); P. Kozicki (Ont.); N. A. Lagatos (New York); S. G. MacDonald (Que.); D. F. Quan (Ont.).

Growing Celery

By E. A. Speers, P. Eng.
Garden Editor

Celery is not an easy plant for home gardeners according to Thalasa Cruso in her book "Making Vegetables Grow." (Knopf) Celery in the wild grows in marshy spots. It needs a great deal of moisture and a soil rich in organic matter. In the garden it is best grown in a trench where the soil can be banked up against it as it grows in summer, to encourage long stems to facilitate blanching of the normally green coloration.



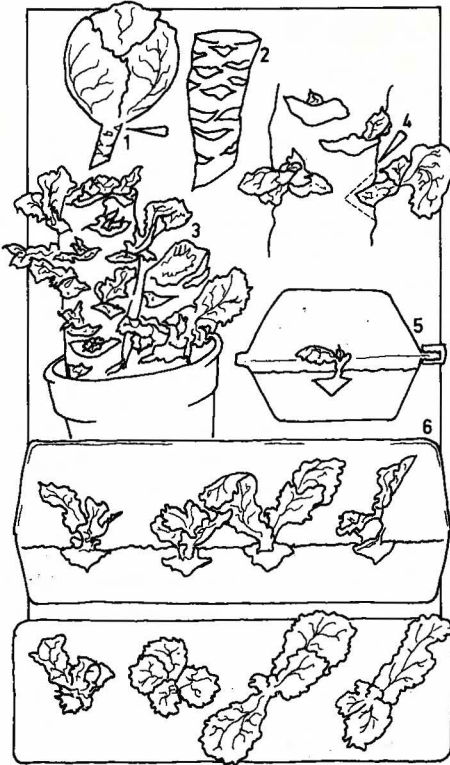
If you grow celery from seed you have to start three months before the last spring frost and use boiling water poured over the seed to soften the seed coat to speed germination.

Celery, leeks and onions can be readily grown much more quickly by using the root normally cut off the

product from the garden or supermarket. If you take the root cut as shown in the first figures and place it in a cup with water, very soon you'll have from three to six plantlets sprouting up from the root. The plantlets when cut out and placed in three inches of peat moss develop into very healthy plants in about 45 days. If fertilized with 20:20:20 the foliage is a dark green and the result is an attractive house plant ready to go into the garden trench in May. The leaves have that fresh celery taste and they can be dried and stored for use in stews and poultry dressing.

Cabbage — a few years ago on Hecla Island we went into the local grocery store. In a cooler in the corner all alone was an old head of cabbage — a poor, small dehydrated head with a length of stem intact. Small 'buddings' were evident on the stem where the leaves had been removed. On enquiring, I was advised it was garbage — a perfect example of Parkinson's Law of Work expanding. On taking it home — yes, my wife Jean agrees I'm a junk collector — I found out how to grow healthy cabbage very easily. This year's cabbage stocks from last year's garden have produced strong plantlets.

Here's How: Cut the stock off. Place it in a cup with water. (I use old polystyrene cups.) Replace the water frequently. Two stocks 3'' to 4'' long will give you 20 to 30 plantlets. The plantlets on developing three or four leaves can be cut out as shown. Place the plantlets in a mixture of peat moss and soil or ver-



miculite. I use a mini-greenhouse — a plastic case which maintains a high level of humidity to ensure healthy growth. The resulting plants are healthier and stronger than those you buy in the spring when grown from seed. They show the nub formation of the cabbage head right from the start. When the leaves push against the top of the case, transplant to a "maxi-greenhouse" — again a plastic case with about 9" of head room. From here they go right into the garden. The soil pH should be 6.0 to 7.5 and rich in organic matter. Cabbages profit by a dusting of ground limestone raked into the soil, plus a 10:10:10 fertilizer well watered in. Give the plants an early dusting of *Bacillus Thuringiensis* or rotenone to keep the cabbage worms down. When

planting protect the stems from cutworms by supplying a ring of wood ash or a protective collar.

When you grow the plantlets watch for aphids which have their eggs winter over on organic matter. They hatch readily in the warmth of the house and reproduce by asexual 'budding' about every five days. Control, using Malathion — two drops in a foam cup of water, sprayed or applied with a foam strip or Q-tip to the plantlets soon clears up the infestations. More than one application may be required.

Fore!

A.P.E.M. Annual Golf Tournament will be held at Falcon Lake on Tuesday, May 31, 1983. See enclosed golf notice for details.

J. Boge, P. Eng.
Chairman, Sports Committee.

Iron Rings

As of April 1st, 1983, Engineers wishing to purchase replacement rings or to exchange rings are requested to contact Harry Wright, P. Eng., for this service. Mr. Wright is at Cowin Steel Company Ltd., 1137 Pacific Avenue, phone number: 775-8161. The office of Cowin Steel is located in the first block west, off McPhillips, on Pacific Avenue. Office hours are 9 a.m. to 5 p.m.

Awards

Nominations for the Merit Award, the Outstanding Service Award and Honorary Life Membership may be submitted to the Awards Committee. For further information regarding terms of reference etc., please contact the Association office.

February Fee Deadline

As members are advised, several times, if the annual fee is not paid "by ensuring that it has been received in the Association office . . . before March 1" an additional administration fee is payable. Council has set the additional fee this year at \$25.00. (In 1982 it was \$10.00) The increase in the additional fee has resulted in 146 more members paying their dues before March 1. Last year dues from 50 members were received in the office without the additional fee after the end of February. This year that number was reduced to 22. All of these members are invoiced for the additional fee.

It is an entertaining time for the staff in the office. They have heard a great variety of excuses, sometimes considerable abuse and they have witnessed several ruses. One early-bird staff member sat in the office at 8 a.m. on March 1 and watched an envelope drop through the mail slot. The dropper was assessed the additional fee.

One member complained vociferously that we don't offer a day's grace, claiming that other organizations do. Not Autopac — besides we offer two months' grace. One member called to say he would have his cheque in the office well before the deadline — but it would be post-dated. Sorry. Several members send their cheques in at the last minute each year, and don't fill them out properly or neglect to sign them.

One unsigned cheque arrived on February 10, mailed in Winnipeg. It was decided there was time to send it back for signature and return before the deadline. When it hadn't

arrived by February 28, an effort was made to try to track down the member in his ivory tower in Fort Garry. This was difficult because he was playing squash and didn't return our call until March 1. Too late to avoid the extra fee. No, he hadn't received the unsigned cheque with a letter asking him to sign and return. Actually he hadn't been receiving any mail at all recently. He had lost the key to his mail box two weeks earlier and hadn't spoken to the caretaker yet about a replacement. Where else but in the I.T.

One cheque arrived on February 28, but it was dated March 1. If the bank charges back a cheque the cost is now \$2.00. The member was phoned at his place of business, he was in Grand Forks, his secretary would be speaking with him shortly and could pass on a message. He phoned from Grand Forks mid-afternoon. Would someone in the office please change the date, forge his wife's initials and he would beat his wife up when he got home. (She had made out the cheque.)

Each year there are at least half a dozen members who are so anxious to avoid the additional fee that they pay their dues twice. Then there are the N.S.F. cheques — and the fees paid by girl friends or married sisters. When John Doe's fees are paid by Jane Green one can only speculate.

One member residing in Saudi Arabia is so overcome by oil largesse that he paid both the practising and the non-practising fee, on time.

The grumbling starts when the late payers are invoiced for a further \$25.00. Staff members are then told

they have ice water in their veins or are petty little bureaucrats, or worse. The complainers are all given a standard answer. Staff members do not violate Association by-laws.

A few members pay their dues with two or more cheques drawn on different banks.

These strange occurrences come to light in February and March, and while the staff may think they have seen everything, each year some new wrinkle is added to the collection.

On March 1 this year three members came into the office and paid the full fee, including the \$25.00, without a whimper.

Curling Professors



Bill Beley and Gerry Clayton shortly after Gerry explained that he was accustomed to standing for no longer than 50 minutes at a time.



Steve Yoshino and Gerry Smith gave up on curling and joined the tryouts for a tooth paste advertisement.

Miconex '83

This Microelectronics Conference and Exhibition will take place during the Microelectronics Week, Winnipeg, May 7-13, 1983. The conference features eight sessions and two tutorials on various topics from applications of microelectronics to designing with chips and microprocessors as well as addressing the challenge of computer education and training for new jobs. The main purpose of the conference is "to stimulate the interest of the local community in the fast growing microelectronics technology and to help in the development of Manitoba as a Center of High Technology." For further information contact Dr. W. Kinsner, P. Eng., or Dr. R.M. Mathur, P. Eng. at 261-9620.

Scholarships

The North American Life-Canadian Council of Professional Engineers Scholarship programme is open for applications. Three scholarships valued at \$5,000.00 each will be offered for the 1983-84 academic year. The purpose of the scholarship is to help working engineers to return to university. Application forms are available in the Association office.

Employment of Engineers

Section 19 of the Engineering Profession Act reads as follows:

19 Except as herein otherwise provided, no person shall knowingly employ as a professional engineer, or for any work that requires the services of a professional engineer, any person who is, not either a member of the association of the holder of a licence issued under this Act.

Efficiency

In these hard times engineers have a duty to increase the efficiency of the organization in which they work. But how can a P.Eng. do that? One way is to observe the successes and failures of other organizations. Here is an example of one very efficient organization:

The Income Tax Office (I.T.) is probably the most efficient of all. Its goal, as set by the Great White Father (GWF), is "Get more money by any means (Hopefully legal) in your power." With such a goal the organization looked at its strengths and analysed the constraints that might hamper it.

One of its strengths was in the fact that peasants (P) did not understand the taxation system. The legalese of the Income Tax Act was very useful, but there was always a risk that some P would read and understand it. So the I.T. (not to be confused with ET which was loveable) started issuing bulletins of what the I.T. meant but didn't say. These are sort of like an engineer's interpretations of his own specifications. These are published daily. Any P who reads all of the Bulletins has no time to conduct useful work so must become a U (unemployed). Whether a person is a P or a U is immaterial. He is completely controlled by the GWF and acts like a D (drone without honey).

But in case a P or U escapes the D syndrome further measures have been taken to overcome the constraints:

1. The St Mary's edifice doors are sealed. No P, U, or D can get in. How the staff gets in is a mystery. Perhaps there is no staff there. Perhaps the GWF and his PMO press all the buttons in Ottawa.

2. There are no incoming telephone lines. This too is a mystery. Without incoming lines how does the spouse of a staff member phone up and say "Bring home 1/2 lb. (227g) of hamburger"?

3. No letters are written. The computer is programmed with 128 phrases — none of which answer questions a P, U or D might ask. No statements are issued or explanations given as to interest charged or changes in assessments.

4. In I.T. dealings a P, U, or D is found guilty before being tried. All levies must be paid immediately even though the reason for the levy is not explained. Answers to queries as to why the levy was made come three months later as one of 128 phrases, so all one can do is appeal.

5. If a D2 (Dolt class 2) decides to appeal an assessment, the same group that made the assessment sits in judgment on the appeal. If a D2 challenges the I.T. in court the D2 will soon be B (broke) because I.T. appeals all rulings and the legal fees would be 2xD2's ability to pay.

Thus one can see that conventional management techniques work well — in this case superbly. Set a goal, and then chart a course to achieve that goal, with all of the tools available, overcoming all obstacles and constraints.

If only the other government departments had goals set with the public's interest in mind there would not be a \$26,000,000,000.00 deficit this year.

Moving?

PLEASE let us have your change of address.

Happy Faces

