



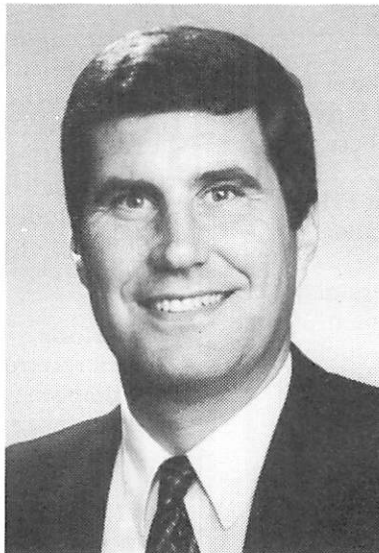
SASKATCHEWAN LAND SURVEYORS ASSOCIATION

# Newsletter

## President's Message to the Membership

By D.A. Bouck, SLS, President

It is with some apprehension that one enters the arena as the President of a group of professionals. The first concern is whether one can maintain the high standards set by those who have preceded him. The second is whether all the issues, both known and those still to appear, can be addressed to the satisfaction of those who have placed their trust in someone to lead their organization. I wish to thank you for the opportunity to serve as your President. The SLSA has an excellent Council this year and a lot will be accomplished.



interview those who were interested in the position soon to be vacated by Murray. Several screenings reduced the almost 100 hopefuls down to seven. Declaring a winner from this extremely talented pool of people was very difficult. Negotiations with the successful person will take place in early July. The next newsletter will feature an article on your new Executive Director.

I had the opportunity to attend the 7th International Conference on Geomatics and the AGM of the

Association of Canada Land Surveyors in Ottawa. Over 800 people from 22 countries were in attendance

The first month as President has been a real roller coaster from an emotional point of view. The 85th AGM was obviously a high. Then, the SLSA lost a good friend and long time member when Clair Traynor passed away on June 13, 1995. More will be said about Clair later on in this issue. June 22nd saw the Committee Chairmen get together with Council to lay out the game plan for their committee's this year. A lot of good work has been done by previous groups and the fruits of their labour will be evident before the next AGM. Council had the second meeting of the new year on the afternoon of the 22nd. At the conclusion of this meeting came the end of an era - this was Murray Skelton's last meeting as Executive Director. He will be retiring on August 31, 1995 and will be sorely missed. Thanks Murray for all the great years of dedicated service to the SLSA.

On the 23rd of June the Executive Committee met to

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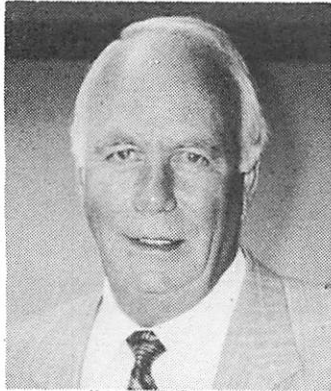
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# Council Highlights



**By M.R. Skelton, SLS  
Executive Director**

The Saskatchewan Land Surveyors Newsletter is published by the Saskatchewan Land Surveyors' Association for circulation to its members.

**Deadlines for articles will be the last Friday in December, March, June and September.**

The opinions of the contributing writers may not be consistent with those of the Council of the Saskatchewan Land Surveyors' Association. Articles may be reprinted with appropriate credit given to the authors.

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## 1995/96 Council

President	Doug A. Bouck
Vice President	Max E. Putnam
Past President	Murray A. Marien
Councillors	N. Scott Whitley Bill C. Soroski Roy J. Pominville Michael L. Waschuk

Executive Director	Murray R. Skelton
Executive Assistant	Rhonda Sitoski
Editor	Doug A. Bouck

## **Seventh Meeting April 17, 1995**

The seventh meeting of Council was held on Monday, April 17, 1995 in the Association Boardroom. All members of Council were in attendance.

The President called the meeting to order at 10:05 a.m. and highlighted his written report on his attendance at the 103rd Annual Meeting of the Association of Ontario Land Surveyors which was held in Toronto, Ontario on February 22, 23 and 24, 1995.

## **Task Force**

The meeting reviewed the report of the Task Force on the Provincial Survey System dated February 19, 1995 together with correspondence from E.J. Desnoyers, Chairman of the Task Force and J.B. Turnbull, Controller of Surveys. The Secretary Treasurer advised that the total cost of the Task Force report including the printing of 250 copies amounted to \$669.32 of which CSMA allotted \$400.00 towards these costs.

## **Admissions**

Council received a letter from D. Babiuk, Chairman of the Admission to the Profession Committee including his interim report which was tabled until the next meeting of Council.

## **Chief Surveyor's Office/RPRs/Form W's**

Council reviewed a written report by M. Marien and G. Craig on the subject of the Chief Surveyor's Office, Real Property Reports and Form W which outlined the history, issues, copyright, access, liability, responsibility, potential value, cost to maintain a data base, confidential information and recommendations. The report was accepted by Council.

The Secretary Treasurer was instructed to request the RPR Committee to review the RPR standards and investigate the possibility of restoring a block corner as well as a lot corner on each survey and to report to Council.

## **University of Calgary - Cadastral Chair**

The Council reviewed the President's letter of February 16, 1995 to the President of the Alberta Land Surveyors' Association on proposed funding for the Cadastral Chair. M. Marien advised that this would be a topic at the President's Forum during the upcoming Alberta Annual Meeting.

### **Prince Albert Brief**

Council reviewed the positive response from the City of Prince Albert and the Secretary Treasurer was instructed to arrange a meeting with the President, Executive Director and J.A. Swystun, City Engineer of the City of Prince Albert and the local surveyors in Prince Albert.

Council continues to investigate the payment of GST on annual fees of public servants.

The meeting recessed for lunch at 12:00 p.m. when E.J. Desnoyers, Director of Legal Surveys and Chairman of the Task Force joined the Council for lunch. During the luncheon, the topics of discussion with the Director included the restoration and re-establishment of road surveys, grid roads, Land Surveys Act amendments, Land Surveyors' Act, Indian land entitlement, GPS and the Task Force Report. Mr. Desnoyers departed the luncheon and the meeting reconvened at 1:30 p.m.

The Secretary Treasurer advised that 25 year pins have been acquired and a list of the eligible active and retired members has been compiled. There are 24 active and 7 retired members eligible for 25 year pins.

The Saskatchewan Land Surveyors' Award in the amount of \$250.00 was presented to Derrek Seeley of SIAST Palliser Campus.

The financial report of the February 1995 Practice/ Administration Seminar indicated a revenue of \$836.00 and expenditures of \$1,092.56 amounting to \$6.10 per member attending or \$3.16 per active member.

The following levies were approved by Council: CCLS levy of \$3,252.80 which is \$40.00 per active member plus GST; WCBE levy of \$1,408.00 which is \$800.00 plus \$8.00 per active member and Cadastral Chair levy of \$1,607.00 all for 1995.

T. Webb submitted a written report to Council on the Association's representation at the Canadian Bar Association Mid Winter Meeting held in Saskatoon on February 2 and 3, 1995. It was his recommendation that the Association not attend next year and a further recommendation that we request a time slot on their agenda for an Association speaker.

Council reviewed a nomination for Life Membership for M.R. Skelton dated April 10, 1995 from G.A. Webster, J.P. Condon, D.V. Franko, J.R. George and W.L. Jamieson. By way of motion, the Council accepted the nomination.

### **Public Relations**

D. Bouck highlighted his written report on his attendance at the North Dakota Land Surveyors' Association Annual Meeting and his attendance at Career Days at SIAST Palliser Campus.

### **Advisory Board**

A written report was received from M. Zulynik on his attendance at the 18th meeting of the Geomatics Engineering Advisory Committee which was held at the University of Calgary on November 4, 1994. The Secretary Treasurer advised that a letter has been forwarded to K.P. Schwarz of the Geomatics Engineering Division advising that L.W. McLeod has been nominated as a replacement for M. Zulynik whose three year term has expired.

### **Land Surveyors and Professional Surveyors Act**

Copies of Bill 41 which received third reading on April 7, 1995 were distributed to Council.

### **Nomination**

T. Webb announced that the following individuals had allowed their names to stand for election: Councillors - M.L. Waschuk and R.J. Pominville  
Vice President - M.E. Putnam

The next meeting of Council is scheduled for Wednesday, May 24, 1995 at the Ramada Hotel in Saskatoon commencing at 3:00 p.m.

The President adjourned the meeting at 6:00 p.m.

### **Eighth Meeting May 24, 1995**

The eighth meeting of Council was held on Wednesday, May 24, 1995 in Saskatoon at the Ramada Hotel. All members of Council were in attendance.

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## Council Highlights (continued)

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The President called the meeting to order at 3:00 p.m. and thanked all members of Council for the work and support that he had received during the past year. He highlighted his written report on his attendance at the recent Alberta Land Surveyors' Annual Meeting.

Vice President Bouck submitted a written report on his attendance at the Awards Banquet and President's Reception at the 65th Annual General Meeting of the Association of Professional Engineers of Saskatchewan.

### **Task Force on Provincial Survey System**

The Secretary Treasurer reviewed correspondence which indicated that the Chairman received a letter from John Turnbull, Controller of Surveys, suggesting a meeting with the Association and the Committee. Council concurred. The Secretary Treasurer was instructed to arrange for the meeting and the Association representatives are to be M. Marien, D. Bouck and M. Skelton.

### **Admission to the Profession**

Council reviewed the Interim Report on Admissions to the Profession by D. Babiuk, Chairperson, D.L. Gurnsey, W.J. Peters and M.J. Seis which was submitted to the last meeting of Council. Council concurred with the report and requested more input from the Committee in regard to the relationship between the Land Surveyor in Training, his principle and the Association.

### **Cadastral Chair**

By way of motion, the Council is to prepare a motion for the Annual General Meeting to the effect that the Association pledge a levy to a maximum of \$70.00 per active member per year, for a period of five years, in support of the Cadastral Chair at the University of Calgary.

The Association's Spring Award consisting of a plaque has been awarded to Larry Martin Bender at SIAST Palliser Campus.

The President stated that 96 applications had been received in response to the advertisements in the Leader Post and Star Phoenix for the Executive Director's position and further advised that there were no applications received from the membership in

regard to Administrative Option A.

Council accepted the Land Surveyor in Training form from P.M. Maloney, SLS and J.T. Skelton, B.Sc.

The next meeting of Council is scheduled for Saturday, May 27, 1995 immediately following the Annual Luncheon.

Following the meeting there was a Reception and Dinner for Council members and their guests.

### **First Meeting May 27, 1995**

The first meeting of Council was held on Saturday, May 27, 1995 in Saskatoon. In attendance: President D. Bouck, Vice President M.E. Putnam, Past President M.A. Marien, Councillors W.C. Soroski, M.L. Waschuk, R.J. Pominville, N.S. Whitley and Secretary Treasurer M.R. Skelton.

The President called the meeting to order at 3:15 p.m. and welcomed the new members to Council. His remarks to Council touched on the Executive Director's position, motions from the Annual Meeting, upcoming Special General Meeting, Public Relation initiatives and the Strategic Plan.

The following Liaison Councillors were named: Finance - M.A. Marien, Education - R.J. Pominville, Practice - M.L. Waschuk, Public Relations - W.C. Soroski, Convention - N.S. Whitley.

Signing authority for the Association is as follows: Cheques under \$1,000.00 to be signed by the Secretary Treasurer and cheques over \$1,000.00 to be signed by the Secretary Treasurer and the President.

A Committee Chairman Workshop including Liaison Councillors is scheduled for Thursday, June 22, 1995 in the Association Boardroom commencing at 10:00 a.m. to be followed by a Council meeting commencing at 1:30 p.m.

The President adjourned the meeting at 4:15 p.m. ♦

## **Second Meeting June 22, 1995**

The second meeting of Council was held on Thursday, June 22, 1995 in the Association Boardroom. All members of Council were in attendance.

The President called the meeting to order at 1:20 p.m. and spoke on his attendance at the Annual Meeting of the Canada Lands Surveyors which was recently held in Ottawa together with his attendance at the 7th Congress of Geomatics in Ottawa as well.

The President distributed "Doug's Goals for 1995/96" and reviewed each of the 10 goals in detail.

### **Task Force on Provincial Survey System**

The Secretary Treasurer advised that a meeting has been scheduled between representatives of the Association, the Controller of Surveys, Chief Surveyor's Office and the survey industry for Thursday, July 6, 1995. Association representatives are M. Marien, D. Bouck and M. Skelton.

### **Prince Albert Brief**

The Secretary Treasurer advised that he has had discussions with land surveyors from Prince Albert and City Design Engineer Jack Jensen and it was the consensus that a meeting between City Officials and local land surveyors would be appropriate at this time. This information was relayed by letter to the City Clerk dated June 2, 1995 in which Council's appreciation was expressed to the City with respect to the survey policy adopted by their Council.

A thank you letter was received from Larry Binder, recipient of the Survey Engineering Technology Award, Palliser Campus, Moose Jaw.

Bylaws were amended by Council in accordance with motions from the Annual meeting, including Life Membership for M.R. Skelton and amending Article XIV, Section 6 (a) allowing a degree or a Certificate of Completion from the WCBE to qualify for Land Surveyor in Training status.

A calendar of events for the next six months was compiled and is printed on page 510 of the Newsletter.

A written report by the Chairman of the Finance Committee with an attached Appendix E outlining information on simple accounting together with various recommendations dealing with the accrual method of accounting, computer accounting programs and the GST. It was the consensus of Council that the Executive Committee in consultation with an

Accountant is to formulate a proposed policy on the financial administration of the Association and submit same to Council for their approval and/or amendment. Once the Council has approved the policy it will be the duty of the Chairman of the Finance Committee to ensure that the policy is implemented and followed. The Secretary Treasurer to arrange for an Accountant to review the financial process, make recommendations and to meet with the Executive Committee.

The President thanked the Secretary Treasurer for his years of service to the Association. The meeting adjourned at 5:00 p.m. ♦

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## **President's Remarks**

*continued from page 493*

at the Geomatics Conference. Fifty exhibitors were present and over 100 papers were given during the three day event. It was definitely worth while attending. The new Canada Land Surveyors Act has been delayed for perhaps a year. The Surveyor General's declaration that only CLS's can survey on Canada Lands and that plans will no longer be fully examined is not affected by the delay in the proclamation of the CLS Act.

The New Act Committee has met several times since the AGM. Two thirds of the Bylaws have been compiled already. A Special General Meeting will be required in the Fall to discuss the results of the hard work put in by this committee.

Many thanks to Max Putnam and his group for the excellent AGM put on in Saskatoon in May. Several new procedures were tried and were quite successful. Presentation of twenty five year pins and a more public ceremony concerning the transferring of the Presidency were most notable.

Change always happens, but this year could be extraordinarily busy with the new Act coming into play, a new Executive Director, Continuing Education officially coming on stream, the effects of the new Surveys Act and a host of Public Relations efforts finally being realized. Council looks for your support and patience during these times.

Have a successful and safe Summer! ♦

# SIAST Palliser Institute

## GPS Training Schedule

The Surveying Engineering Technology Program at Palliser Institute has developed a series of training programs to assist industry in meeting this challenge. Program content was developed by Leland Petterson, P. Eng. instructor in the Surveying Engineering Technology program, after discussions with industry representatives and fellow instructors.

Briefly details of the classes are:

- 1. Fundamentals of GPS For Managers (4 hours)**  
This four-hour seminar is designed to provide an understanding of GPS concepts and operations of the satellite system for managers and supervisors. Topics include fundamental concepts, capabilities, limitations, applications, and costs.
- 2. Introduction to GPS (8 hours)**  
This one-day seminar is an overview of the NAVSTAR Global Positioning System for the non-technical user. Topics covered include fundamental concepts, operational constraints, GPS hardware and software, coordinate systems, datums, logistics, and economical issues.
- 3. Advanced Workshop on GPS (24 hours)**  
This three-day workshop includes topics from the Introductory Course and goes into depth in positioning methods, error sources, accuracy, pre-mission planning, community base stations, S/A and A/s, GPS hardware, and field operations. Students will also participate in field exercises to familiarize the users with the system operations and capabilities. The Introduction course is a prerequisite for this workshop.
- 4. Advanced Workshop on GPS/GIS Integration (40 hours)**  
This five-day workshop includes topics from the Advanced Workshop on GIS plus indepth study of coordinate systems, GIS database design, post-mission processing, basemap integration, datums, data collection, and error analysis.

Students will also participate in two days of field training with GPS equipment and software and two days of training with GPS/GIS integration.

For more information contact Blaine Renwick, P. Eng., Extension Coordinator, Engineering Technology Division, Palliser Institute, SIAST, (306) 694-3223 or fax (306) 694-3209.

## Enviro-Business '95

Over the next few years businesses will be driven to respond to increasing environmental concerns. The ability to implement pro-active prevention-oriented responses will be required to enjoy any significant competitive advantages. Palliser Institute, Engineering Technology Division is host to a two-day conference intended to help businesses expand into this new environmental marketplace. The conference will consist of plenary and individual sessions that will provide practical business financial, and technical information designed to improve the competitiveness of the private sector.

Several agencies are cooperating with Palliser Institute in organizing Enviro Business '95. These include: Saskatchewan Environmental and Resource Management, Saskatchewan Legal Education Society Inc., Saskatchewan Economic Development, Industry Canada, Environment Canada, Saskatchewan Environmental Managers Association and Saskatchewan Applied Science Technologists & Technicians.

Topics include: Environmental Law and Business, Environmental Business Opportunities, Financing Environmental Projects, Environmental Liability, Environmental Data Bases, Geographic Information Systems, Global Positioning Systems and the Internet.

For more information contact: Blaine Renwick, P. Eng., Extension Coordinator, Engineering Technology Division, Palliser Institute SIAST, Phone: (306) 694-3223, Fax: (306) 694-3209 ♦

## Councillor's Comments



**W.C. Soroski, S.L.S.**

It was a beautiful Summer morning, the sun was shining, there was a soft cool breeze from the North West. As I backed out of the garage I spotted my golf clubs in the corner; I stopped. "No, not today!". Today was a work day.

As I arrived at our first R.P.P for the day I still could remember seeing those golf clubs in the corner. The survey was very routine. The plan was recent. The monumentation was fair. There were no encroachments. We completed the survey and still I couldn't get those golf clubs out of my mind.

Back at the office, I found waiting, "the R.P.R. from hell." It certainly looked that way. The plan was old. Our records showed we had nothing on the block. The area was notorious for 20 foot houses on 25 foot lots. This survey had all the makings of a real hair puller.

This survey was near my old home during my high school days. In fact, it was right on the path that I travelled to high school every day for four years.

As I arrived on site, everything looked the same as it did in years gone by. I had walked by the block corner hundreds of times, but this time, for a different reason. We used the bar finder to no avail.

The plan was originally posted with wooden posts. Our hope was that some Surveyor had done some re-establishment. Our first time around the block we came up with one possibility, a gas pipe in the middle of the block about 200 feet north of our survey. The gas pipe was three feet from the edge of the sidewalk while the fences were almost at the edge of the sidewalk. Some quick chainage checks started to give

some credibility to the gas pipe. The gas pipe monument was something that was used quite frequently during the 30's and 40's and the 50's.

With not much else to go on we decided to reference the gas pipe and excavate. We found the pipe to be planted in fill. Approximately one and a half feet down, we hit natural soil. Two scoops later we were looking at a wooden post, the typical 2" x 2" rotted wood that fell apart as the shovel hit it. What a golf game! The hunt was on. All too often the search was unrewarded, but today was looking up.

At this point I forgot all about other unsuccessful searches for wooden pots. In my mind I was now reviewing the circumstances that allowed me to find this wooden post. The fill over natural ground, the fences being built closer to the sidewalk than they should have and the nature of the neighbourhood were all indicators that this was a good place to find an original monument.

As a Surveyor, I have always felt that my duty was to find the original monument or re-establish were the original was. Mechanical re-establishments always leave a measure of doubt in my mind.

I would like to encourage my fellow Surveyors to keep the faith. Keep looking for that original monument. You must agree, there is nothing like finding a wooden post; well almost nothing.

By the way, my survey from hell turned out to be a walk in the park. After two hours I had it built with two more wooden posts.❖

# The Technical Side - Instrument Transport & Storage Methods

By Martin Cook, Vice President, Ingenuity Inc., as seen in "The Ontario Land Surveyor" Spring 1995 edition.

Many survey instruments are subjected to transport conditions that can be very damaging. Most surveys are usually not done on the street, but in the rough, rocky terrain of an undeveloped area or parcel. The typical vehicle that you are transporting your precision equipment in is a truck, not a luxury sedan. The typical rough ride can beat the heck out of you, not to mention your equipment. Even moderate jostling and vibration can cause damage to improperly stored and protected equipment. The least amount of movement generally is at the middle or centre of the vehicle — where the crew rides. The best place for your equipment is near the centre, in the middle of the vehicle, not by the tailgate, the roughest hard-sprung place in the vehicle. Using padded boxes for all equipment is typical of conscientious surveyors. All equipment should be properly positioned and secured. Does your prism pole ride with the rebar and hammers, near the tailgate? Do your tripods have their caps in place to protect the head surface? Take a ride at the tailgate on a rough site and listen to the sound of the equipment! There shouldn't be any sound or movement.

How do you best protect the tools of our trade? Presented here are a few suggestions covering levels, theodolites and electronic total stations.

## Auto Levels

Automatic levels contain a mechanical device that provides a level line of sight with moderate mislevelling. The most common precision compensator is the four wire pendulum or glider. When the level is upright in its operating position the compensator does what it is designed to do — it moves to compensate line of sight and is limited by stops on each end of its travel. The compensator can be constantly moving when transported, and may be moving enough to be banging on the stops. This constant banging can cause intermittent sticking due to degradation of the stops themselves. The best way to prevent compensator movement is to invert the unit so that the suspension wires are relaxed. In the past, instruments such as the Wild NA-2 or Zeiss Ni2 used to be placed in their cases so that they were transported upside down or face down. Many modern levels are no longer cased in this manner. It is up to

the user to properly prepare the level for transport.

**"Even moderate jostling and vibration can cause damage to improperly stowed and protected equipment."**

## Optical Theodolites

Theodolites with mechanical vertical angle compensators are subject to the same potential damage as an auto level. You can check for a mechanical compensator by slowly rocking the theodolite back and forth from vertical with the telescope in line with the rocking motion. If you can hear a clicking sound as the unit is rocked, it probably has this type of compensator. These units should be transported face down to minimize compensator movement. One transit/theodolite type with non-mechanical compensators are the Wild T-1 & T-1A. These have an oil compensator and should always remain upright to keep the oil off the upper surface of the compensator assembly. If you observe that the vertical circle image is blurry, there is probably oil on the upper view port. The condition will correct itself after setting in an upright position for a period of time. Transit and theodolite tangents should be lightly locked to prevent vibration damage to the bearings. This procedure is discussed in the next section.

## Electronic Total Stations

Most compensators in electronic total stations (ETS) are electronically sensed capacitive level vials and are not subject to motion damage. This fluid is compensated for temperature and linear level run characteristics by the system microprocessor. Topcon ET-1 and ET-2 and Zeiss Elta 2 and Elta 3 use an oil reflective level compensator which is not subject to motion damage. Mechanical pendulum compensators such as those used in Wild TC-1600 or the Nikon DTM-1 should be transported face down to limit movement.

Our main concern in transporting most ETSs is not the compensator but the bearings and end play at the angle encoders. For some reason, manufacturers

have constructed the instrument case so that the carry handle is to one side of the ETS. This leads to the ETS being transported, not only by hand but also in the surveyor's vehicle, on its side. When the instrument is on its side, the weight of the telescope and distance meter pod (4-8 lbs.) is putting transverse weight on the trunnion axis (telescope axis) bearings. This is not only bad for the bearing surfaces but also for the angle reading stator/rotor systems. These two pieces of glass are adjusted to a gap of .01mm (less than .0005 of an inch) by the mount of the stator. When the rotor, which is attached to the telescope axis, moves back and forth laterally, the gap may become too large or too small, causing the stator and rotor to touch. Contact can destroy the photo etched markings that allow the system to count and display angles correctly and accurately. Most systems use this type of angle measurement with the exception of the Topcon Et-1 and Et-2, Wild T-1000 and TC-1600 and a few others. These latter instruments have an angle reading system that is known as an absolute reading system. These units have an angle encoder which is a greater distance (+/5mm) from the detector. While there is not the close proximity of a stator and rotor, it doesn't mean that these won't be subject to error due to telescope axis movement; it just means that transport position is less critical.

Back to the carrying case: Instruments with encoders are best transported with the stator and rotor systems on end: that means, for almost all ETSs, face down. You will have to determine the proper positioning of

the case for transport. It will probably not be the same position used to hand carry the ETS.

Now that the ETS is face down and the angle reading systems are protected, we must address vibration damage. Do you lock the motions or not? Old school says leave them loose. When loose, the stator and rotor systems are allowed some movement to and away from each other. We feel that the tangent locks should be lightly tightened to prevent the bearings from vibrating, while still allowing the motions to be moved by a hard shock. When snugged up, the movement is limited. Forcing the motions to rotate when the tangents are lightly tightened will not damage the equipment. These instruments are designed so that the angle reading systems are a separate assembly which is independent of the clamping mechanism forces. If the motions are left loose, there can be some movement that can cause bearing and retainer wear in a small area. If this wear occurs, the linearity and repeatability of the instrument can be degraded.

***As always, remember ... take care of your equipment and it will serve you well.***

If you have any questions about a specific instrument or would like to comment on this article, I can be contacted at The Technical Side, 1562 Linda Way, Sparks, NV 89431, or you may fax correspondence to (702) 359-6671.♦

## 1994 ALSA Salary Survey

*Following is a portion of the ALSA survey as seen in the ALS News, March 1995 edition.*

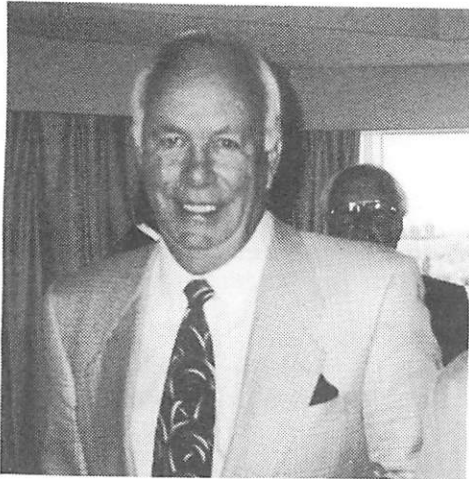
*All replies average annual (all inclusive)  
(Bracket number indicates number of replies)*

Registration Year	Private Practice Owners	Private Practice Employees	Industry Government & Education	All Private Practice	All Replies
1990 - 1994	(0) —	(3) 75,000	(2) 50,000	(3) 75,000	(5) 65,000
1980 - 1989	(13) 91,922	(6) 69,166	(4) 57,250	(19) 84,735	(23) 79,955
1970 - 1979	(20) 105,000	(3) 75,000	(4) 69,500	(23) 101,086	(27) 96,407
Prior to 1970	(6) 92,500	(4) 78,750	(2) 65,000	(10) 87,000	(12) 83,333
Average	(39) 98,717	(16) 73,750	(12) 61,417	(55) 91,454	(67) 86,074

## ***Life Member Saskatchewan Land Surveyors' Association***

### **Murray R. Skelton**

*The following is the eighth in a series which highlights the careers of S.L.S. Life Members*



Murray Reginald Skelton was born in Radville, Saskatchewan on August 10, 1931. He obtained his Grade XII in Weyburn, Saskatchewan in 1948. Murray attended the University of Toronto in 1949 and completed his first year engineering at the University of Saskatchewan in 1950. After articling to John Nesbitt and Cecil Biddell, Mr. Skelton was granted his Saskatchewan Land Surveyors' Commission No. 122 on June 20, 1953. He obtained his pilot's license in 1954 and his Appraisal I and II designations from the Appraisal Institute of Canada in 1969 and 1970 respectively.

From 1953 - 1957, Mr. Skelton was employed as a land surveyor with PFRA and in 1957 was promoted to senior land surveyor at PFRA. In 1961 he became the Chief of the Legal Surveys Divisions, Engineering Branch, PFRA and from 1980 to August 1986 was Land Manager PFRA responsible for administration of PFRA land and improvements located throughout

Manitoba, Saskatchewan and Alberta. In August 1986, Mr. Skelton retired after 35 years of service with PFRA. After his retirement from PFRA, Murray became the President and Manager of M.R. Skelton & Associates Ltd., a land surveying and consulting firm with headquarters in Regina.

As well as serving his Association, Mr. Skelton has been active in various community volunteer organizations some of which include the Cubs and Scouts, Christ the King Men's Club, Knights of Columbus, The United Way, Rotary and the Y.M.C.A. Murray has served or presently serves on the Board of Directors for the Catholic Family Service Society, Group Medical Services and the Wascana Golf Club.

Since receiving his commission in 1953, Murray has served on the majority of the committees of the Association as well as a member of the University of Saskatchewan Board of Examiners and the Western Canadian Board of Examiners for Land Surveyors. He served as Vice President in 1962 and again in 1986. He was also President of the Association in 1963. On September 1, 1987 Murray was employed as the Executive Director of the Saskatchewan Land Surveyors' Association, the position in which he remains until August 31, 1995 at which he has decided to retire and enjoy a well deserved retirement. I am sure his days will be filled with golfing, vacationing and hunting.

Murray and his lovely wife, Roxane reside in Regina. The Skelton's have four children all pursuing careers of their own.❖

## 1995/96 Council

From left to right: M.L. Waschuk, Councillor; W.C. Soroski, Councillor; M.E. Putnam, Vice President; M.A. Marien, Past President; D.A. Bouck, President; N.S. Whitley, Councillor; R.J. Pominville, Councillor



## Work Less, Earn More!

By R.T. (Rick) Hargraves, B.C.L.S., as seen in the "BC Link", April 1995 edition.

Two years ago, my partner and I decided that we should have an extra day off every two weeks. Having only one chance at this game called life, more time off rather than less seemed appropriate. We amended our partnership agreement to include the nine day fortnight with each having every other Friday off. Of course, if a statutory holiday fell on a Friday, you have instant four day weekends with Thursday off as well. Or conversely, if your Friday preceded a Monday holiday, bingo another four day weekend. Amazingly, the extra long weekends balanced out perfectly.

After a successful year of the nine day fortnight, we decided to set up the four day work week. We also decided to shorten the office hours from 8:00 a.m. - 5:00 p.m. to 8:00 a.m. - 4:00 p.m. giving each of us a 32 hour work week. We decided each partner would have six months of Mondays and six months of Fridays for his day off. Now any Monday or Friday statutory holiday created a four day weekend for both of us. Now I know you're saying how did we earn any money with all this time off.

Well, a funny thing happened. We actually earned more in the four day week year than the previous year. Not only did we earn more in total, we also earned 28% more per hour worked. How was this possible you say? We both agreed that the shortened hours made us want to work harder during work time and we did not stretch our work to fill the day.

Our philosophy is we work to live, not live to work. The fewer hours we work, the more time we have for the fun things in life. And if we earn more along the way, it's a nice bonus. The moral to the story is if you are a sole proprietor and work long hours, get a partner and enjoy more time off. If you are in a partnership and work long hours, you could also enjoy less work for more money. When the game is over and you are laid to rest, it will not have mattered whether you worked seven, six, five or four days per week, except of course to you.❖

*You cannot push anyone up the ladder unless he is willing to climb himself.*

*Andrew Carnegie*

# Antepasados

By Fred Roeder, P.S. as seen in the New Mexico Newsletter, July 1992 edition.

## Carl Friedrich Gauss

Every self-respecting surveyor knows that our first, third, and sixteenth Presidents had for a brief period in their lives been surveyors. But not even the most chauvinistic of our peers would argue that Washington's picture appears on a one dollar bill because of our country's desire to honor a great surveyor. Surveyors just are not that famous, or are they?

Imagine my surprise when my nephew handed me a new German ten mark bill and my eyes fell on a triangulation diagram consisting of a chain of triangles connecting 17 named stations, alongside a picture of a sextant covering almost half of the entire bill. On the obverse was a portrait of Carl Friedrich Gauss and the equation of his famous error curve.

I doubt seriously that the average German knows more about Gauss than does the average American, who is in the top 10% if he knows that Gauss was one of the three greatest mathematicians of all time (the others being Archimedes and Newton), whose accomplishments fill pages in any encyclopedia of mathematics and science. It is therefore all the more remarkable that those in charge of designing money chose to honor Gauss the geodetic surveyor, rather than Gauss the mathematician and astronomer. It helps to drive home an important truth: the surveyor plays a key role in the life of any civilized society.

Carl Friedrich Gauss was born in 1777 into a poor family (his father was a gardener) in the German city of Braunschweig (Brunswick). He was an extremely precocious child, astounding his parents and teachers with his mathematical abilities from the age of three years. There is a story that the child mentally added the numbers from one to a hundred in a few minutes by reasoning that the order in which they are added doesn't matter, and he simply added  $1 + 99 + 2 + 98 + 3 + 97 \dots$  all the way to  $49 + 51$ , reducing the whole problem to  $(49 \times 100) + 100 + 50 = 5,050$ . While still a teenager he propounded the theory of least squares, demonstrated a solution to the age old problem of dividing a circle into seventeen parts, and made important mathematical discoveries which he was too shy to publish and entrusted only to his diary.

His genius came to the attention of Ferdinand, Duke of Brunswick, who undertook to finance his education and in the process became his lifelong patron and friend. Gauss attended the University of Gottingen and in 1799 got a doctorate in mathematics from the University of Helmstedt. About this time he turned his attention to astronomy, making brilliant computations of orbits of asteroids. In 1807 he became director of the observatory in Gottingen, a post he held until his death in 1855.

Most of his contributions to mathematics and science he set down in about 155 meticulously written papers. He published anything only after the most thorough investigation and after he was sure it met his motto: "Ut nihil amplius desiderandum relictum sit" - that nothing further remains to be done. His mind was so full of numbers that when he was interrupted in solving a problem and told that his wife was dying, he reportedly replied: "Tell her to wait until I am done."

From about 1817 Gauss made studies in geodesy. His interest was aroused by a need for an accurate determination of the geographical position of his observatory. In 1828 he was commissioned by George IV of England to triangulate the entire kingdom of Hannover. Hannover is a hilly expanse of about 15,000 square miles in northern Germany between the Elbe river and the Dutch border, which in those days belonged to England, the English monarchs being of the House of Hannover.

Gauss was too much of a mathematician to fall in love with the mechanics of triangulation. "All the measurements in the world are not worth one theorem by which the science of eternal truth is genuinely advanced," he once wrote. The survey, which Gauss completed in 1847, did not produce a very accurate map of Hannover, there being more to making a map than establishing geodetic positions on a few triangulation stations. It resulted however in a number of important advances in the mathematics of curved surfaces, such as his development of curvilinear coordinates. To increase the accuracy of his observations he developed a new lens (Gauss eyepiece, still used for auto-collimation in spectrometers). To improve pointing accuracy on

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## Notice to Land Surveyors!

Effective July 1, 1995, the Surveyor General of Canada Lands will no longer be conducting full examinations of all survey returns submitted for recording in the Canada Lands Surveys Records.

Surveyors have been notified that after April 1, 1995 all legal surveys carried out on Canada lands must be executed by a Canada Lands Surveyor. As a further step in deregulation the Surveyor General will be placing full responsibility for the correctness and completeness of surveys and associated plans on the Canada Lands Surveyor carrying out the work.

Plans submitted to the Surveyor General for recording

in the Canada Lands Survey Records after July 1, 1995 will only be given a cursory review. This does not preclude the Surveyor General from conducting a full examination in specific circumstances.

A process is being established to randomly assess field surveys and plans after they are recorded in the Canada Lands Survey Records.

For further information please call the Regional Representative of the Surveyor General, Legal Surveys Division, Geomatics Canada, for the respective province or territory.❖

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## I.W. Tweddell Memorial Award

Mr. Robert Bushman (left) receiving the I.W. Tweddell Memorial Award from Mr. Guy Craig, SLS (right). The award was presented on January 26, 1995 at the University of Saskatchewan Awards Day Ceremony.



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## Antepasados (continued)

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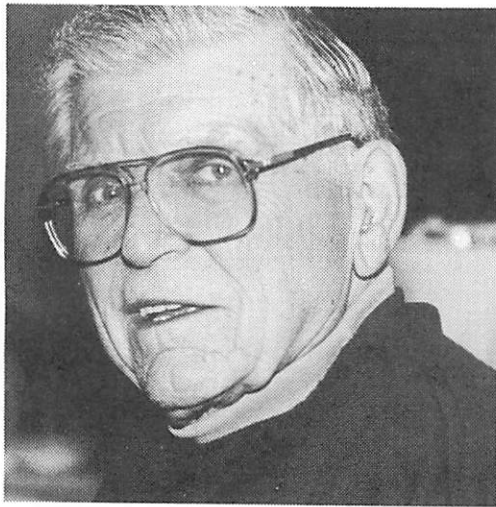
distant targets he invested the heliotrope. The most important result of his triangulation was a book on geodesy, which he published in two volumes between 1844 and 1847.

Gauss probably did not consider himself a surveyor

anymore than George Washington did. But: "Tell me what you do and I will tell you who you are." I think our profession can claim him for his immense contribution to surveying and accept the honors on the German 10 mark bill.❖

## In Memoriam

### John Clair Traynor, S.L.S., Life Member



John Clair Traynor passed away on Tuesday, June 13, 1995 in Regina, Saskatchewan.

Clair was born in Regina on January 2, 1916, attended Victoria School and graduated from Central Collegiate in 1934. He went on to attend the University of Saskatchewan in Saskatoon from 1937 to 1942 at which time he met and later married Elinore Burwash in 1943. After graduating as a Civil Engineer in 1942, he joined the Canadian Army's Royal Corp of Engineers and served overseas in England and Europe with the 2nd Canadian Field Survey Company, until 1945. On return to Canada he was discharged with the rank of Captain and began his career as a land surveyor.

Clair articulated to J.E. Underwood of Underwood and McLellan and remained in their employ from 1946 to 1949. He received Commission #94 as a Saskatchewan Land Surveyor on May 15, 1948. He

accepted the appointment of Chief Surveyor to Land Titles Office in 1949 and remained there until 1956. While at the Land Titles Office he also served in the Militia and retired with the rank of Lieutenant/Colonel in 1956.

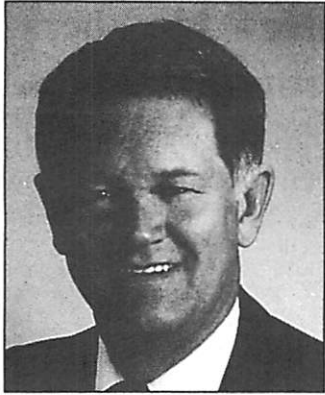
In 1956 Clair went on to become the Director of Surveys for Saskatchewan's Department of Highways in Regina. While there he developed the Grid Road Program. Later he developed a proposal for the Central Survey and Mapping Agency and was appointed the first Director of CSMA. Clair retired from government service in September 1980. Clair is a past president of the Saskatchewan Land Surveyors Association and the Canadian Institute of Surveying.

Clair and his wife, Elinore were long-time members of Lakeview United Church and the Lakeview community, enjoying tennis, dancing and bridge with their many friends. They were also long time cottage owners in the resort community of Buena Vista. After retiring, Clair enjoyed life to the fullest, resuming his long-delayed golf game, fishing and puttering at their cottage at Buena Vista.

Clair is survived by Elinore, his wife of 52 years, and their five children - spread from Hinton, Alberta to Toronto, Ontario. Clair will be missed by all. ♦

## Copyright and Survey Plans

The following is a commentary by G.K. (Ken) Allred, ALS, as seen in the ALS News, March 1995 edition.



G.K. (Ken) Allred, A.L.S.

Copyright in survey plans continues to be a concern amongst surveyors, particularly as a defence when something goes wrong. Unfortunately copyright is often an ineffective barrier to a claim, when a surveyor has made a mistake that has resulted in damages to a third party unless it can be shown that the information was used for an inappropriate purpose.

The most common circumstance resulting in misuse of a surveyor's plan usually results from a Real Property Report being used in a real estate transaction subsequent to the one for which it was specifically prepared.

In the case of a clear measurement or other survey error that is not obvious to the layman, it may be difficult to enjoin a party who has breached the copyright in an action. If however, the error is one which was fairly obvious, or which subsequent users or conveyancers in the normal course of their duties should have questioned, there may in fact, be a case.

For instance, if the surveyor located the wrong house on his RPR, and the house was clearly of a different size and shape, there may be a reasonable argument that the landowner should have noticed that the plan didn't jive with the actual building configuration.

Similarly if incorrect title information was shown, the conveyancers involved also owe a duty of care to the parties suffering damages, and could reasonably be enjoined in the action against the surveyor.

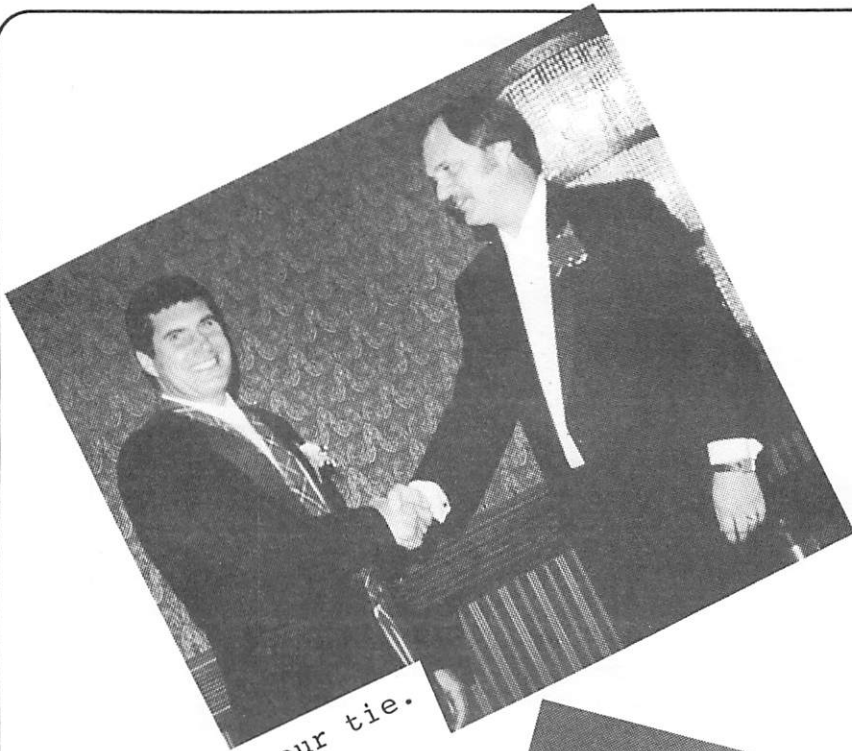
Users of survey documents have a responsibility to peruse them carefully and not merely accept them at

face value. A solicitor acting for a purchaser or mortgagee must be aware of the limitations of survey documents and be knowledgeable enough to make the relevant comparisons between the paper title and the Real Property Report.

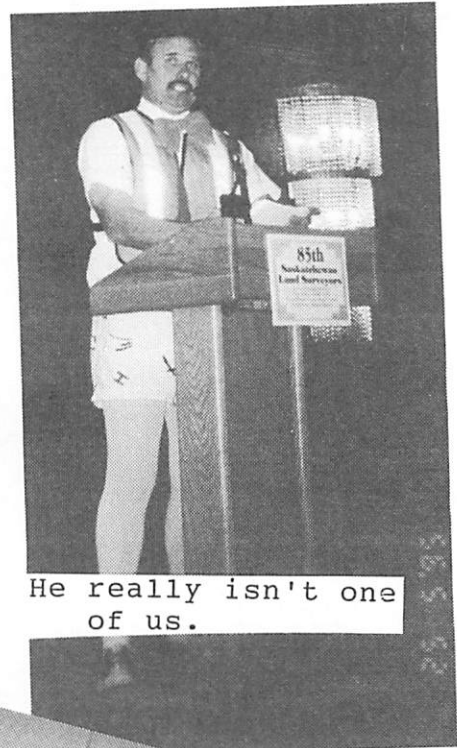
The interest of an owner or mortgagee is primarily in the house or other improvements on the property which create value for which they are prepared to pay. There is no document or *bill of sale* for houses or improvements. They are mere fixtures attached to the land which is the subject of a conveyance in our legal system. It is only the Real Property Report that links the fixtures to the paper title. Without a Real Property Report, and an understanding of what it is intended to provide, the conveyancer cannot express his professional opinion as to the quality of title being conveyed. The conveyancer therefore, needs to examine and compare the title documents with the Real Property Report in order to give a considered opinion as to whether the deed actually conveys the property it is anticipated to convey. In conducting this examination and comparison, the conveyancer has a duty to question any apparent inconsistencies that are evident from his examination.

The argument for only using original documents is a warning to users that only original, signed documents are complete and authentic. A party who uses a copy, or unsigned version may have an action if it can be proven that the copy used was the same as the original signed version, and there was in fact, an error resulting from the negligence of the surveyor that caused damages. It can also be argued in these circumstances that the user should have known better than to use a copy, particularly if it was noted on the copy that it was not to be used unless signed in original form.

In conclusion, we must all be cautious not to rely on copyright or other disclaimers to protect us from our errors. Disclaimers may assist in a defence of a claim, however they will not totally absolve the surveyor who made a mistake that resulted in damages to his client or a third party.❖



Thanks for your tie.  
Doug - Murray



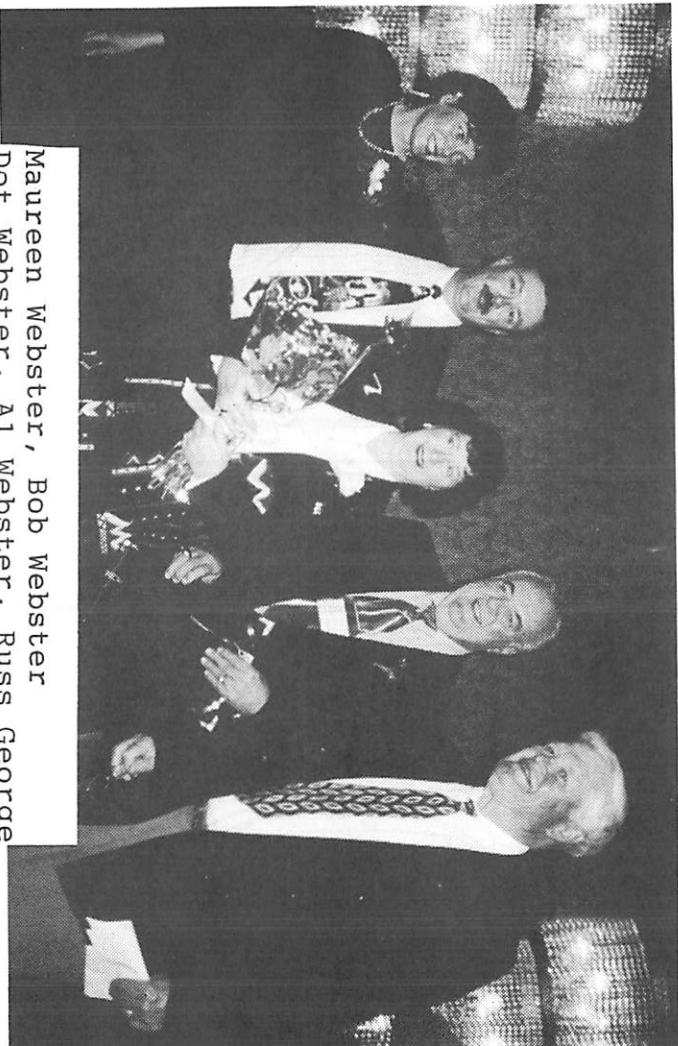
He really isn't one  
of us.



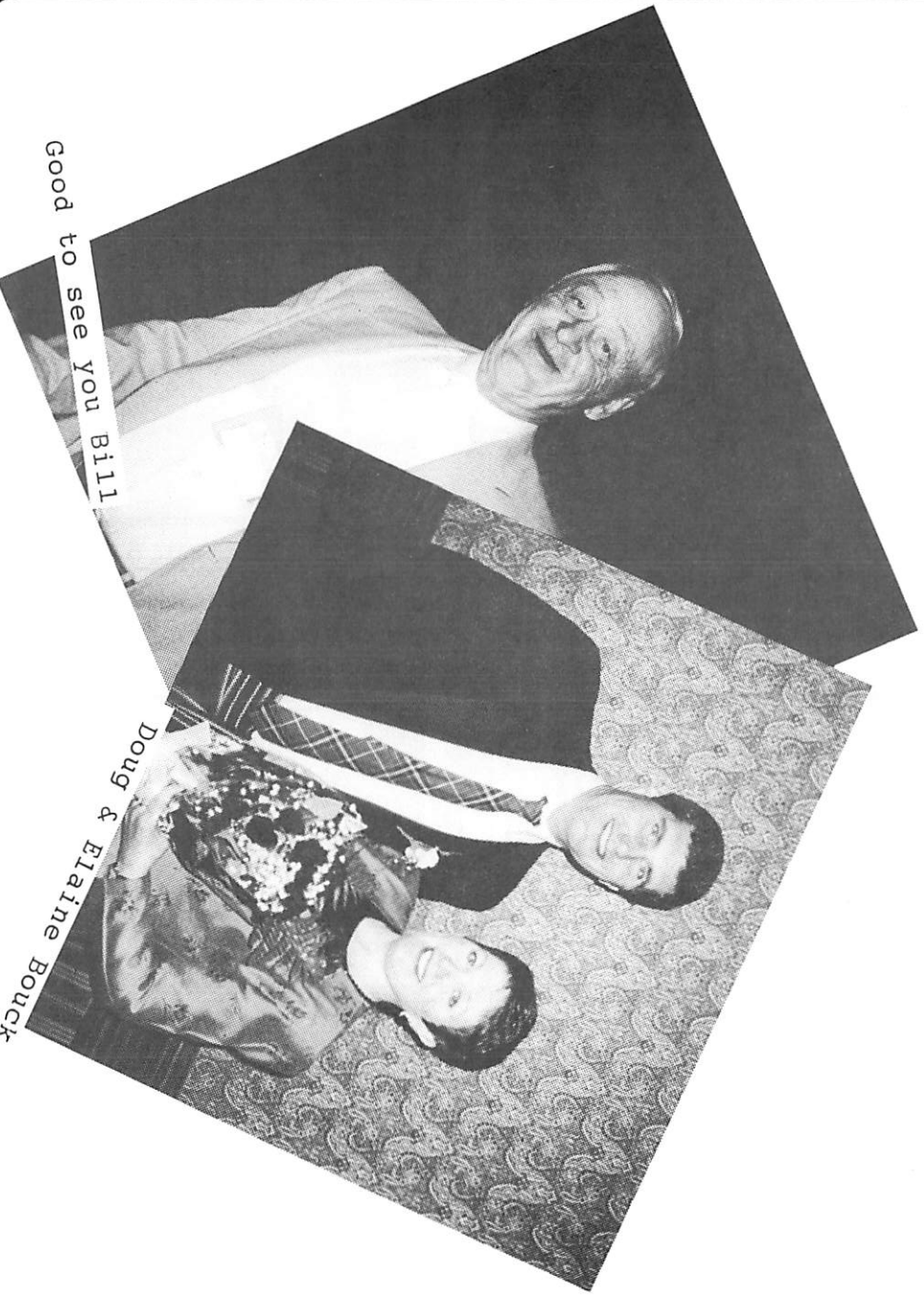
They look like they are having  
TOO good a time.  
Murray - Jim



Doug not following  
the piper - AGAIN.



Maureen Webster, Bob Webster  
Dot Webster, Al Webster, Russ George



Good to see you Bill

Doug & Elaine Bouck

# '95 Events July 1995

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2	3	4	5	6	7	8	
9	10	11	12	13	14 Education Committee	15	
16	17	18	19	20	21	22	
23	24	25	26	27	28 Practice Committee	29	
30	31						

# August 1995

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6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25 Executive Committee Meeting	26
27	28	29	30	31		

# September 1995

						1 Now Executive Director	2
3	4	5	6	7 Council Meeting #3	8	9	
10	11	12	13	14	15	16	
17	18	19	20	21	22	23	
24	25	26	27	28	29 Newsletter and Advertisement Supplement Deadline Education Committee	30	

# October 1995

1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	Manitoba AGM			21
22	23	24	25 Budget Workshop	26 Council Meeting #4	27	28
29	30	31				

Note: October 12, Professional Liability Insurance Seminar, Saskatoon

# November 1995

		1	2	3	4	
		Nova Scotia AGM				
5	6	7	8	9	10	11
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26	27	28	29	30	Fall Seminar (Saskatoon)	

# December 1995

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3	4	5	6	7 Council Meeting #5	8 Annual Fee Notice	9	
10	11	12	13	14	15	16	
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