

~~CONFIDENTIAL~~

LIST OF INDIVIDUALS WHO HAVE BEEN APPROACHED FOR THE CHAIRMANSHIP OF THE  
RESEARCH AND DEVELOPMENT BOARD AND HAVE DECLINED.

<u>NAME</u>	<u>PRESENT POSITION</u>	<u>REASON FOR DECLINING</u>
Buckley, Oliver	President, Bell Labs.	Health
Bush, V.	President, Carnegie Institution	Health
Conant, J.B.	President, Harvard Univ.	Present and future commit- ments at Harvard
DuBridge, L.A.	President, California Institute of Technology	Present and future commit- ments at Cal Tech
Hovde, F.L.	President Perdue Univ.	Vetoed by Trustees of Perdue on basis of needs of University.
Stratton, J.A.	Provost, MIT	(Approached Indirectly) Criticality of need of MIT
Thomas, C.A.	Vice President, Research, Monsanto Chemical	Present and future commit- ments at Monsanto
Wilson, R.E.	Chairman of the Board Standard Oil (Indiana)	Health

HISTORICAL

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<u>NAME</u>	<u>LOCATION</u>
Russell, Robert Price	Standard Oil of La. 30 Rockefeller Plaza, New York
Shea, Timothy Edward	Western Electric Co. 195 Broadway, New York
Sherwood, Prof. Thomas, K.	MIT, Cambridge, Mass.
Steward, George Walter	State University of Iowa, Iowa City, Iowa
Stewart, Harrison	
Stewart, Prof. Irwin Dickey	Whitman College, Walla Walla, Washington
Swain, Dr. Robert C.	American Cyanamid Co., Stamford, Conn.
Terman, Prof. Frederick Emmons	School of Engineering, Stanford Univ. Palo Alto, California
VanVleck, Prof. John H.	Harvard Univ, Cambridge, Mass.
Waterfall, Wallace	Director of Research, The Celotex Corp. 120 S. LaSalle St., Chicago, Ill.
Weaver, Dr. Warren	Rockefeller Foundation 49 W 49th St., N.Y.
Winne, Harry	Gen. Electric Co. Schenectady, New York
Webster, William (Suggested by Dr. Bush -- acceptable to scientists -- should be approached through Dr. Conant)	Vice President, New England Power Co. Former Chairman of Military Liaison Committee and Deputy to the Secretary of Defense on Atomic Energy

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<u>NAME</u>	<u>LOCATION</u>
Heald, Pres. Henry T.	Illinois Inst of Tech Chicago, Ill.
Hildebrand, Prof. Joel Henry	Univ of California Berkeley, Calif.
Houston, Livingston	President Hensselaer Polytechnic Inst.
Hunsaker, Dr. Jerome C.	MIT, Cambridge, Mass.
Hutcheson, J.A.	Westinghouse Electric Corporation East Pitts, Penn.
Ives, Dr. Herbert Eugene	32 Laurel Place, Montclair, New Jersey
Jeffries, Zay	Chemical Department, Gen. Electric Co. 1 Plastics Avenue, Pittsfield, Mass.
Langmuir, Dr. Irving	Gen. Electric Company Schenectady, New York
Latimer, Prof. Wendell M.	Univ of Calif Berkeley, California
Lauritsen, Prof. Charles C.	Calif Institute of Tech Berkeley, Calif.
Loomis, Prof. Francis Wheeler	University of Illinois Urbana, Ill.
Mather, Prof. Kirtley Fletcher	Harvard University, Cambridge, Mass.
Meyerhoff, Prof. Howard Augustus	7 Hampton Terrace, Northhampton, Mass.
Millikan, Prof. Clark B.	Calif. Institute of Tech. Pasadena, Calif.
Murphree, E.V.	Standard Oil Dev. Co., New Jersey
Potter, Dean Andrey A.	School of Engineering Purdue University, Lafayette, Ind.
Prentice, Pres. Donald Bishop	Rose Polytechnic Institute Terre Haute, Ind.
Richards, Dr. Alfred N.	University of Penn. Phil. Pa.
Robbins, Dr. William Jacob	N.Y. Botanical Gardens, N.Y.
Rogers, Pres. Harry Stanley	Polytechnic Inst. of Brooklyn Brooklyn, N.Y.

22 December 1949

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POSSIBLE PROSPECTS FOR CHAIRMAN, RESEARCH AND DEVELOPMENT BOARD

<u>NAME</u>	<u>LOCATION</u>
Anderson, Dr. C. D.	California Institute of Technology Pasadena, California
Bacher, Dr. Robert Fox	Cornell University Ithaca, New York
Bainbridge, Dr. Kenneth T.	Harvard University Cambridge, Mass.
Baitsell, Prof. George Alfred	Yale University New Haven, Connecticut
Batt, Dr. William George	Biochemical Research Foundation Newark, Delaware
Bolton, Dr. Elmer K.	DuPont Wilmington, Delaware
Chubb, Dr. Lewis Warrington	Westinghouse Electric & Manufacturing Co. East Pittsburgh, Pa.
Dempster, A.J.	University of Chicago Chicago, Ill
Dryden, Prof. Hugh Latimer	2020 Pierce Mill Road, N.W. Washington, D. C.
Dunham, Dr. Theodore, Jr.	Mt. Wilson Observatory Pasadena, Cal.
Dunning, Prof. John Ray	Columbia University New York, New York
Fair, Prof. Gordon M.	7 Scott St. Cambridge, Mass.
Foots, Dr. Paul Darwin	Gulf Res & Dev Co. P.O. Drawer 2038 Pitts. Pa.
Frenkel, Fry, Dr. Thornton Carl	Bell Telephone Labs 463 West Street, New York, N.Y.
Gaither, Rowan	Lawyer San Francisco
Hahnwell, Prof. Gaylor Probasco	Univ of Pennsylvania Philadelphia, Pa.
Harrison, Prof. George Russell	MIT, Cambridge, Mass.

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<u>NAME</u>	<u>PRESENT POSITION</u>	<u>REASON</u>
Oppenheimer, J.R.	Director, Institute of Advanced Study	Deemed not suitable*
Pauling, Linus	Head, Department of Chemistry California Institute of Tech	Health
Pitzer, K.S.	Head, Research Division, AEC	Youth
Montieth, A.C.	Westinghouse	(?)
Russell, R.P.	Head, Agriculture Program Venezuela	Health
Sawyer, R.A.	Dean of Physical Sciences Division, Univ of Michigan	Scientific Stature
Smith, M.W.	President, Baldwin Locomotive Works	(?)
Suits, C.G.	Director of Research, General Electric Company	Importance to defense of present commitments
Tait, J.T.	Dean, University of Minnesota	Deemed not suitable*
Tuve, M.A.	Carnegie Institution	Deemed not suitable*
Waterman, A.T.	Office of Naval Research	(?)
Wilson, C.L.	General Manager, AEC	Unavailable
Wright, T.P.	Head, Aeronautical Engineering Cornell University	Deemed not suitable*

\* Advice as to suitability was sought in various cases from the following:

Dr. V. Bush, President, Carnegie Institution; Dr. Oliver Buckley, President Bell Labs.;  
Dr. A. M. Richards, President, National Academy of Sciences; Dr. Detlev Bronk, President,  
Johns Hopkins University; and others.

①

Name: ADAMS, Dr. Roger

Age: 61

Present Position: Head, Department of Chemistry

Business Address: University of Illinois, Urbana, Ill.

Immediate Superior: STODDARD, Pres. George D.  
University of Illinois, Urbana, Ill.

Biography: Instr. ORG. CHEM, Harvard, 1913-16; Asso. Prof., Univ. Ill., 1916-19; Prof., Univ. Ill., 1919- ; Head Department Chem., 1926- ; Science Advisory Board, U.S. Government, 1934-35. Member Nat'l Defense Research Comte.; President American Chemical Society, 1935; Nat'l Acad. (councilor, 1930-36).

Scientific  
Qualifications: Dr. Adams is one of the outstanding chemists of the country. His scientific stature is of the highest. As a member of NDRC, and Head of the Division of Chemistry of NDRC, he had considerable experience with the military side of science.

Managerial Ability: As President of the American Chemical Society and as Head of the Chemistry Division of NDRC Dr. Adams has a background of managerial experience. Dr. V. Bush had had some reservations as to Dr. Adams' managerial ability. However, after a widespread check on January 5 which included Dr. Conant, Dr. Bush reports that his reservations on this count have been entirely resolved.

Remarks: Of the four candidates Dr. Bush now reports that he would rate Adams unquestionably the number one candidate, as a result of (a) the removal of any doubt as to his executive ability, and (b) the fact that William Webster will be even more difficult to get than had been previously supposed. Dr. Conant also rates Adams and Webster as number 1 and 2 choices in that order.

Suggested Approach: A letter direct from the Secretary of Defense to Dr. Adams.

W. HANSON

(V)  
2

Name: WEBSTER, William

Age: 50

Present Position: Vice President, New England Power Association

Business Address: 4441 Stuart Street, Boston, Mass.

Immediate Superior: HERRMANN, Carl S.  
President, New England Power Association  
4441 Stuart Street, Boston, Mass.

Biography: Asst. to Gen. Manager, New England Power Association, 1928-33; Asst. to Pres. same co., 1933-35; Vice Pres., The Narragansett Elec. Co., & Asst. Gen. Mgr., So. Dist., New England Power Assn., 1935-41; has occupied the following positions, 1942 to date; v. pres. and dir., New England Power Assn., R. I. Pub. Service Co., and the Narragansett Elec. Co.; v. pres. and trustee, Mass. Power & Light Assocs; v. pres. United Elec. Kwys., and officer in var. affiliated utilities. Pres. and trustee Mass. Utilities Assocs. Mgmt. conslt., OPA, 1941-45; transition Office, NDRC, 1943-46; conslt, Joint Research and Devel. Bd., 1947; Chairman, Military Liaison Committee, Department of Defense, 1948-49; Consultant to MIC, 1949-.

Scientific Qualifications: Mr. Webster is primarily an engineer. He is not well known in scientific circles, nor very well known in professional engineering circles. In this respect he is inferior to Dr. Adams and Dr. Sawyer.

Managerial Ability: Mr. Webster has had much executive experience (see biography), and in particular has had considerable experience in managing organizations associated with the military. His performance as Chairman of the Military Liaison Committee of the Department of Defense is generally regarded as excellent. There is no question but what his past experience in working with and within the Government would stand him in good stead.

Remarks: Recent checks by Dr. Bush (January 5) have indicated that it would be very difficult to get Mr. Webster's services. For this and other reasons Dr. Bush rates Mr. Webster as number two choice among these candidates, as does Dr. Conant. If an approach is made to Mr. Webster Dr. Conant would be able to render considerable assistance.

Suggested Approach: Informal approach through Dr. Conant and/or approach from the Secretary of Defense to Mr. Herrmann.

HANSON

3

Name: SAWYER, Dr. Ralph A.

Age: 55

Present Position: Professor of Physics, Univ. of Michigan and  
Dean Horace H. Rackham School of Graduate Studies, Michigan

Business Address: University of Michigan, Ann Arbor, Michigan

Immediate Superior: RUTHVEN, President Alexander G.  
University of Michigan, Ann Arbor, Michigan

Biography: Asst. Physics, Chicago, 17-18; Instr. Michigan, 19-22,  
asst. prof., 22-27, assoc. prof., 27-30, prof., 30-46;  
tech. director joint task force one and director instru-  
mentation and sci program Bikini bomb tests, Marshall  
Islands, 46; Prof. Physics and Dean Horace H. Rackham  
School Graduate Studies, Michigan, 46-.

Scientific  
Qualifications: Dr. Sawyer is not as widely known in scientific circles  
as Dr. Adams or Dr. Bacher. However, he is a scientist  
of recognized ability, and had war and post-war experience  
with military applications of science, at the Dahlgren  
Proving Ground and at the Bikini Bomb tests respectively.

Managerial Ability: The consensus of opinion, particularly from officers  
associated with Dr. Sawyer on the Bikini Test viz. Admiral  
Parsons and General McAuliffe, is that Dr. Sawyer is a  
very excellent manager, although his quiet manner does not  
tend to give this impression at first acquaintance. As  
Admiral Parsons put it, "He is deceptively modest."  
Admiral Parsons also pointed out that "Under a perfectly  
terrible regime at Dahlgren during the war Dr. Sawyer  
nevertheless managed to do an excellent job on the task  
that he was faced with there." These comments indicate the  
capacity of Dr. Sawyer to command the respect of the  
military.

Remarks: Dr. Bush, as a result of these and other checks, has come  
to the conclusion that Sawyer would be an excellent prospect,  
rating perhaps after Adams and Webster. Dr. Compton himself  
also held a very high opinion of Sawyer primarily as a  
result of his observation of Sawyer's operations as technical  
director of the Bikini Tests.

Suggested Approach: Dispatch of letter prepared by Dr. Compton before his  
departure to Dr. Sawyer. The Acting Chairman, Research and  
Development Board has this letter in his files.

DAWSON

6. Jack Small.

Comment by Lewis Strauss: I don't know whether Eber would release him or whether Jack could afford to come, but I should think he would like to if he has succeeded in getting the Maxson organization put together. I don't imagine he wants to stay on that job.

7. Hartley Rowe.

Comment by Lewis Strauss: Mr. Rowe would be an unusually good choico because he is knowledgeable in the whole field, having worked on the Manhattan Project, and is now a member of the General Advisory Committee to the Atomic Energy Commission, appointed by the President pursuant to the statute. He is Vice-President and Chief Engineer of the United Fruit Company-- tough, intelligent, and energetic.

Comment by Dr. Bush: Is now head of Aeronautical Committee of RDB. He has great capacity, and accomplished mush for Manhattan District. However, his performance in RDB thus far has not been outstanding. I think he is weary.

8. Luke Hopkins.

Comment by Lewis Strauss: Lastly, there occurs to me the name of Luke Hopkins. He was the man who handled all the administrative work of the Navy's Applied Physics Laboratory (Tuve's proximity fuse laboratory). Hopkins is a Baltimore investment banker, Trustee of John Hopkins -- able and self-effacing. You thought enough of his work two years ago to give him the Medal for Merit.

Comment by Dr. Bush: On previous list. Probably not forceful enough.



9. Luke Hopkins.  
Comment by Dr. Bush: Has all the qualifications except possibly aggressive leadership.
- \* 10. Garland.  
Comment by Dr. Bush: You know him better than I do.
11. Artemus L. Gates.  
Comment by Dr. Bush: Now active in Aeronautics Committee, RDB. May not be sufficiently forceful for post now being considered.
12. Penn Brooks.  
Comment by Dr. Bush: Sears Roebuck, Vice President. Good man to have in mind, but not for this.
13. Charles Thomas.  
Comment by Dr. Bush: Monsanto. Was very active on atomic energy development. Probably not available.
14. Amory Houghton.  
Comment by Dr. Bush: Chairman Corning Glass. Was in WPB. Probably not available.
15. R. E. Russell.  
Comment by Dr. Bush: Engineer in oil business. Had much to do with incendiaries. Probably not the man for this post.
16. H. G. Batcheller.  
Comment by Dr. Bush: President Alleghany Ludlum. 61. Was in WPB. Conant thinks highly of him. Rather old for this affair.
17. W. H. Harrison.  
Comment by Dr. Bush: Vice President, AT&T operations. Major General under Somervell. Probably not available.
18. Harvey Bundy.  
Comment by Dr. Bush: Not aggressive enough for this affair.
19. Lloyd Berkner.  
Comment by Dr. Bush: Physicist, Carnegie Institution. Was Executive Secretary Joint Research and Development Board. Very able and well liked. But insisted on returning to science and hence probably not available.
20. J. R. Killian.  
Comment by Dr. Bush: Vice President, MIT. One of the most able executives in the educational field. Compton could not spare him, but a good man to keep in mind.



21. Rowan Gaither.

Comment by Dr. Bush: Lawyer, San Francisco. Was associate director Radiation Laboratory at MIT. Now committed to job of revising RAND for Air Force, which will take 3 months. After that a good man to know.

22. John T. Connor.

Comment by Dr. Bush: Lawyer. Was general counsel OSRD, and decidedly able as you know, for he carried a number of things for you. Now Secretary and General Counsel Merck & Company and should not be disturbed as he has just taken post.



Carey of A.T.&T.  
(Suggested by Mr. Forrestal)

WW III 168-W-14 June 28, 1949

" " ~~Better Bacteriological Warfare~~ 168-W-14-4

Patents Lawrence Riddell June 28 142 P-80-R

Radio - TV. 1952-53 150-R-90 Secret

United - States June 28, 49 - 1953 VOL 5 FBI 166-U-15

CBC - News Roundup ) VOL 6 TOP SECRET.

corr. with Minister of Defense VOL 25 (1951) 151-R90 ~~TS~~

Canadian Amb. to US. 3 files <sup>166</sup> U-15-5

Dwight Eisenhower 174-D-16-12C

Menzies - Field Marshall Montgomery - Guy Mallet 54-55-56-57 174-D-16-12-M

Radio & TV. (1956) 171-C-18-17

Air Force Aug 11 (1953-54) Ulysses Bourdreaux 175-D-28-11-B

Campney R.O. (1954-57) Air Vice Marshall R. Lollisshaw D-28-11-C

172-C-20-C

Atomic Weapons 192-N-16-2. 5354 on 192-N-16-2

Defense Research Board 177-D-70-~~B~~<sup>F</sup>(M) (1955)

Dew - Line 1956 177-D-70-12

Canadian Amb. (1956-57) Secret 220-U-15-4.

National Defense 226-N-3 (1951-3)

Special Committee on Defense Exp. (1949-53) <sup>226</sup> P-1-45

DR. C.S. MacKenzie 211-S-11-4m. 1954

Georges Tassel 211-S-11-4U 54-55-56

Department Files D.O.D. 230 - (1955-57)

Defense Production 230. 1953-56

D.O.D. 2 files 52-56 222-D-12

Distant Early Warning Line 1950-55 222-D-23

Defense Research 242-151- (1957)

11 Aug 53-57. VS. Secret VOL 4. 219-U-15

Atomic Energy. 223-E-3-1 (1949-52)

Desk Diary 403-1957

Guest Book 1951-57 (405)

see Meteorological 1948 27-179-4  
International High Frequency Conference 1948 <sup>39-</sup>C-10-5  
Defense Research Board Employment 1947-48. 55 <sup>11-</sup>55-1  
International Joint Commission Employment Recommendations <sup>12-</sup>60-6.  
Immigration Cases Germany <sup>13-</sup>70-1 1947-48  
Radio 29-90. 1947-48  
C.D. Howe 16-96-A - 1948  
Canadian US. Defense 26-151-7 1947-48  
Military Attaches 26-151-A 147-48  
Navy Personal & Confidential 1949 45-D-24-11  
Defense Research Board 45-D-24-13 1949.  
International Joint Commission 1948 55-I-16  
Air Defense 48-49 47-D-50 and D50-A  
Joint Canadian - US. Defense (48-49) 47-D-50-1  
Department of Defense (1949) 44-D-24  
National Defense (June 28 1949-53) 90-D-24  
" " Top Secret 1952 same  
" " Air Force 1950 90-D-24-11  
External Affairs - Secret 1950-1951 88-D-12  
" " Pu & Conf 1953 " "  
Permanent Joint Board on Defense Secret 1949 (June 28) <sup>91-</sup>D-24-14  
" " " " " 1953 " " "  
Defense Research Board June 28, 1949 Conf. D-24-15  
Field Marshall Montgomery 1953. 88-D-12-1  
National Radio Policy 71-R-90 1949.  
Conferences Top Secret 84-C-10-1952.  
Television Secret 86-C-24-4  
A. Mac Namara 1950-1953 Labour. 90-D-20-MAC  
WW III 78-W-14 (1949)  
World Government 78-W-12. (1949)

Folder Guide Rt. Hon. Louis Stephen St. Laurent.

Defense Secy 95-D-50 (1950-53)

" NATO Top Secy 95-D-50-2 (1949-51) June 28.

Defense Top Secy (552) 95-D-50-5 (1952)

Defense Research Organization D-50-10 Personal 1950

As Top Secy 1952.

St. Laurent Sign 1953.

1951-53

Security Clearance 96-D-50-17 (52-53)

53

Deputy Minister DOT, 94-D-40-D. (1950)

DOT. Personal & Confidential 93-D-40 1950-53

Deputy DOT 1950 94-D-40-D

DOT C.D. House 49-53 94-D-40-4-e

I.J. Commission MacNaughton 114-1-16-me

Defense Production 97-D-58-~~2~~ Top Secy 452

St. Laurent 59

Operation Underwater 124-N-16-2 Netherlands Top Secy

N.R.C. 124-N-18 Personal & Confidential 2 files

Area Top Secy Vol 9. (1953) 119-K-20-1

Atomic Bomb file 124-N-18-1 (1949 June 28) NRC also 1950 and 50-52

Radar file 125-N-18-2. 5 files @ catalog for three

Hydrogen bomb file 125-N-18-3 and 125-N-18-3-S.

Atomic Energy 125-N-18-4

RCMP Secy 1950 117-D-10-4

Dr. Fred Hoyle 152-R-90-H (1951)

N.S. Canadian Ambassador to 166-U-15-6 June 28 49, → 1753 (5) file

Visit to U.S. 166-U-15-11

Minist Amisels

General MacArthur 1951 167-U-25-13 2 files

Nova Scotia, about 1767, the son of Peter McNab, a naval officer who settled in Halifax about 1758. He inherited from his father McNab's Island, in Halifax harbour; and he became a member of the Legislative Council of Nova Scotia, and of the old Council of Twelve. He died on June 1, 1847. In 1789 he married Joanna Cullerton; and by her he had several children.

[E. M. Chadwick, *Ontarian families* (2 vols., Toronto, 1894-98).]

**McNaught, William Carlton** (1888-1963), author, was born in Toronto, Ontario, February 13, 1888, and educated in Toronto schools and the University of Toronto (B.A., 1911), where he was the editor of the *Varsity*. He joined the *Calgary Herald* in 1912 and the *Toronto News* in 1914. From 1919 to 1936 he was a writer and executive with J. J. Gibbons advertising agency, and he later worked in the editorial department at Ryerson Press, the United Church of Canada's publishing house. In 1940 he wrote *Canada gets the news* for the Canadian Institute of International Affairs, and, with H. E. Stephenson, *The story of advertising in Canada*; in 1953 he wrote *What time the tempest*. Mr. McNaught was secretary treasurer of the *Canadian Forum* from 1936 to 1948 as well as being director of the company and an editor of the magazine. He served with the Canadian army in the First World War in the 84th battalion with the rank of captain. He was a member of the staff of McKim Advertising Limited from 1937 to 1952. He died at Toronto, Ontario, February 26, 1963.

[*Can. who's who*, 1955-57; Metropolitan Toronto Library Board, *Biographical scrapbooks*, vol. 21; *Canadian Forum* (April, 1963).]

**McNaught, William Kirkpatrick** (1845-1919), manufacturer and politician, was born at Fergus, Canada West, on September 6, 1845. He spent his early years on a farm; but later went into business in Toronto, and became the president of the American Watch Company. From 1906 to 1915 he represented North-West Toronto in the Ontario legislature; and he died at Toronto, Ontario, on February 2, 1919. He was the author of *Lacrosse and how to play it* (Toronto, 1873), and some pamphlets on commercial subjects.

[Morgan, *Can. men* (1912); *Can. parl. comp.*]

**McNaughton, Andrew George Latta** (1887-1966), soldier and diplomat, was born in Moosomin, Saskatchewan, February 25, 1887. He received his education in engineering at McGill University (B.Sc., 1910; M.Sc., 1912) and joined the faculty of engineering at that university. He had been a member of the Canadian Militia since 1909, and after the outbreak of war in 1914 he was attached to the 2nd Brigade, Canadian Field Artillery, and

went overseas. He won the D.S.O. and was three times mentioned in despatches. He was wounded twice. Before the end of the war he became a brigadier-general in command of the Canadian Corps Heavy Artillery. He remained in the military service after the war, holding staff and command appointments, and attended the Staff College at Camberley in England and the Imperial Defence College. He became Chief of the Canadian General Staff in 1929, with the rank of major-general, continuing in this post until 1935, when he became president of the National Research Council. On the outbreak of the Second World War he returned to the army as Commander of the First Canadian Division. He became Corps Commander in 1940, with the rank of lieutenant-general. When an army headquarters with two corps was formed in 1942 he became Commander of the First Canadian Army. He gave up his command in December, 1943, and returned to Canada early in 1944, retiring from the army with the rank of general in September of 1944. He became Minister of National Defence in November, replacing J. L. Ralston (q.v.), who had resigned over the issue of conscription. In August, 1945, he left the cabinet and became Chairman of the Canadian section of the Canadian-U.S. Permanent Joint Board on Defence until 1959. He was Chairman (Canadian section) of the International Joint Commission from 1950 to 1962; Canadian representative on the United Nations Atomic Energy Commission (1946); president of the Atomic Energy Control Board of Canada (1946-48); and Canadian permanent delegate to the United Nations and representative on the Security Council (1948-49). He was created C.M.G. (1919), C.B. (1935), and C.H. 1946.

[J. Swettenham, *McNaughton*, 3 vols. (Toronto, 1968-69); Metropolitan Toronto Library Board, *Biographical Scrapbooks*, vol. 24.]

**Macnaughton, John** (1858-1943), educationist, was born near Kenmore, Perthshire, Scotland, in 1858, was educated at the University of Aberdeen, and at the Edinburgh Theological College, and was ordained a minister of the Church of Scotland. He came to Canada in 1889 as professor of Greek in Queen's University, Kingston; and though he spent the years 1908-19 at McGill University and the years 1919-25 at the University of Toronto, his best work was done at Queen's. Though he wrote little, he was a most stimulating teacher and one of the most strikingly original personalities in academic life in Canada in his day. He retired on pension in 1925; and most of his later years were spent in England, but he died at Montreal, Quebec, on February 5, 1943. His only book was *Lord Strathcona* (Toronto, 1926), but a volume of his *Essays and addresses* was published after his death (Kingston, 1946).

[W. D. W. (Queen's University, Ontario, 1941); T. corner of empire of Toronto mont

**MacNeil,**  
geologist and uni  
Sydney, Nova  
studied engineering,  
Xavier University  
with Dr. W. T. Tho  
in 1931 on a ge  
Brunswick, and be  
Princeton, receiving  
some years as an o  
berta, Oklahoma, a  
to St. Francis Xav  
ment of geology in  
in the establishme  
operative geologica  
sachusetts Institut  
Nova Scotia govern  
of the department  
Xavier University  
mayor of Antigon  
years. He had a dee  
benefits of educati  
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opment of Nova Sco*  
of the Mining Soc  
and *The transver*  
(Trans. Roy. Soc. C  
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[*Proc. and Tra*

**McNeil, Neil** (18  
archbishop of Tor  
Mabou, Nova Scot  
He was educated a  
tigonish, Nova Sc  
priest of the Roma  
From 1884 to 1891  
College; and from  
apostolic of St. J  
the title of bishop  
came archbishop o  
ronto on May 25, 1  
[Morgan, *Can.  
who*, vol. 2.]

**MacNeill, Joh**  
and educationist.  
Bruce county, Or  
He was educated a  
ronto (B.A., 1896  
dained a minister  
1889. From 1899 t  
churches in Winn  
1930 he was appoi

*Pursuit*

R.F.D. 5  
Gales Ferry, Connecticut 06335  
U.S.A.

*SAGA's UFO Report*

333 Johnson Avenue  
Brooklyn, New York 11206  
U.S.A.

*Second Look*

10 "E" Street, S.E.  
Washington, D.C. 20003  
U.S.A.

*The Skeptical Inquirer*

Box 29  
Kensington Station  
Buffalo, New York 14215  
U.S.A.

*TRUE Flying Saucers & UFOs Quarterly*

21 West 26th Street  
New York, New York 10010  
U.S.A.

*The UFO Investigator*

5012 Del Ray Avenue  
Washington, D.C. 20014  
U.S.A.

*The UFO Newsclipping Service*

Route 1—Box 220  
Plumerville, Arkansas 72127  
U.S.A.

*The UFO Ohio Journal*

P.O. Box 5012  
Rome, Ohio 44085  
U.S.A.

## Appendix C

### ABBREVIATIONS AND ACRONYMS, UFO-RELATED

*Compiled by J. Richard Greenwell*

- AAAS—American Association for the Advancement of Science  
AAS—American Astronomical Society  
ACWS—Aircraft Control and Warning System (USAF)  
ADC—Air (later Aerospace) Defense Command (USAF)  
ADIZ—Air Defense Identification Zone (USAF)  
AEC—Atomic Energy Commission (defunct, see DOE)  
AFB—Air Force Base (USAF)  
AFCRL—Air Force Cambridge Research Laboratories (USAF)  
AFOSR—Air Force Office of Scientific Research (OAR)  
AFR—Air Force Regulation (USAF)  
AFS—Air Force Station (USAF)  
AFSB—Australian Flying Saucer Bureau (defunct)  
AFSC—Air Force Systems Command (USAF)  
AFSCA—Amalgamated Flying Saucer Clubs of America  
AIAA—American Institute of Aeronautics and Astronautics  
AISS—Air Intelligence Services Squadron (USAF, defunct)  
AMC—Air Matériel Command (USAF, defunct)  
AMRL—Aerospace Medical Research Laboratory (USAF)  
AOP—Anomalous Observational Phenomena  
APRG—Aerial Phenomena Research Group  
APRO—Aerial Phenomena Research Organization  
ARDC—Air Research and Development Command (USAF)  
ARPA—Advanced Research Projects Agency (DOD)  
ATC—Air Traffic Control (FAA and USAF); Air Transport Command (USAF, defunct, see MATS); Air Training Command (USAF)  
ATIC—Air (later Aerospace) Technical Intelligence Center (USAF, defunct, see FTD)  
BIS—British Interplanetary Society  
BL—Ball Lightning  
BMEWS—Ballistic Missile Early Warning System (USAF)  
BMI—Battelle Memorial Institute  
BOAC—British Overseas Airways Corporation (now British Airways)  
BST—British Summer Time  
BUFORA—British Unidentified Flying Objects Research Society  
CAA—Civil Aeronautics Agency (defunct, see FAA)  
CAUS—Citizens Against UFO Secrecy  
CAVU—Ceiling and Visibility Unlimited  
CCF—Cosmic Circle of Fellowship  
CE—Close Encounter(s)  
CETI—Communication with Extraterrestrial Intelligence  
CFSIB—Civilian Flying Saucer Investigation Bureau  
CIA—Central Intelligence Agency  
CIRVIS—Communications Instructions for Reporting Vital Intelligence Sightings (JANAP 146)  
CNES—Centre National d'Études Spatiales (France)  
CNIFAA—Comitato Nazionale Indipendente per lo Studio dei Fenomeni Aerei Anomali (Italy)  
CSI—Civilian Saucer Intelligence (defunct)  
CSICP—Committee for the Scientific Investigation of Claims of the Paranormal  
CSIRO—Commonwealth Scientific and Industrial Research Organization (Australia)  
CSS—Central Security Service (NSA/DOD)  
CST—Central Standard Time  
CUFOS—Center for UFO Studies  
CUN—Centro UFOlogico Nazionale (Italy)  
DEW—Defense Early Warning (USAF)  
DIA—Defense Intelligence Agency (DOD)  
DOD—Department of Defense (U.S.)  
DOE—Department of Energy (U.S.)  
ECCM—Electronic Counter-Countermeasures (USAF)  
ECM—Electronic Countermeasures (USAF)  
ELINT—Electronic Intelligence (USAF)  
EM—Electromagnetic  
ERDA—Energy Research and Development Administration (defunct, see DOE)

## Appendix B

### PERIODICALS, UFO-RELATED

Compiled by Ronald Story

**Australia**  
*The Australian Flying Saucer Research Society* magazine  
 Box 2004 G.P.O.  
 Adelaide, South Australia, 5001

*Australian UFO Bulletin*  
 P.O. Box 43  
 Moorabbin, 3189  
 Victoria, Australia

*Australian UFO Researcher*  
 P.O. Box 6  
 Lane Cove  
 NSW, Australia, 2066

**Belgium**  
*Ufologie Phénomènes Spatiaux*  
 Boulevard Aristide Brand, 26  
 1070 Bruxelles  
 Belgium

**Brazil**  
*Insolito*  
 R. Caio Prado, 32—Apto. 23  
 CEP 01303—S. Paulo—Brasil

*Ovni*  
 Caixa Postal 363  
 Rio de Janeiro (RJ)  
 CEP 20040 Brasil

**Canada**  
*Canadian UFO Report*  
 Box 758  
 Duncan, B.C.,  
 Canada V9L 3Y1

*UFO Canada*  
 P.O. Box 145  
 Chomedey, Laval, P.Q.  
 H7W 4K2 Canada

*UFO-Quebec*  
 B.P. 53  
 Dollard-des-Ormeaux, P.Q.  
 Canada H9G 2H5

**Denmark**  
*UFO-NYT*  
 Skandinavisk UFO Information  
 Fl. Ahrenkiel DK 2970  
 Holmevaenget 5  
 Horsholm, Denmark

**England**  
*BUFORA Journal*  
 95 Taunton Road,  
 London SE12 8PA  
 England

*Flying Saucer Review (FSR)*  
 West Malling,  
 Maidstone, Kent,  
 England

*Fortean Times*  
 P.O. Box 152  
 London N10 1EP  
 England

*Merseyside UFO Bulletin (MUFOB)*  
 11 Beverley Road,  
 New Malden,  
 Surrey KT3 4AW  
 England

### Appendix B

*Spacequest*  
 P.O. Box 400,  
 Kings Langley, Herts.,  
 England

### France

*Les Extraterrestres*  
 Saint Denis-les-Rebas  
 77510—Rebas—France

*Lumières dans la Nuit*  
 "Les Pins"  
 43400 Le Chambon sur Lignon  
 France

*Phénomènes Spatiaux*  
 69, rue de la Tombe-Issore  
 F 75014 Paris  
 France

### Germany

*CENAP Report*  
 Limbacher Str. 6  
 6800 Mannheim 52  
 Germany

### Ireland

*Irish UFO News*  
 19 Cairnshill Avenue  
 Belfast BT8 4NR  
 Northern Ireland

### Italy

*Clypeus*  
 Via Massena 15  
 10128 Torino  
 Italy

*Notizario UFO*  
 Via Vignola, 3  
 20136 Milano  
 Italy

*UFO Phenomena*  
 C.P. (P.O. Box) 190  
 40100 Bologna  
 Italy

### Japan

*JUFOR4*  
 c/o Tomoaki Hirata  
 142-01 Kanda-Ichiba  
 Tachibana-Ku, Kobe  
 Japan

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### Appendix B

### Netherlands

*Tijdschrift Voor Ufologie*  
 Lange Aker 28,  
 9942 HL Luthuizermieden  
 Netherlands

### Spain

*Stardak*  
 Balines, 66  
 Barcelona—A  
 Spain

*Vimanas—CJOVE*  
 Rialtaul, 22  
 Santander,  
 Spain

### Sweden

*SAF Bulletin*  
 Fack, S-171 02,  
 Solna, Sweden

### United States

*The APRO Bulletin*  
 2910 East Kierstead Road  
 Tucson, Arizona, 85712  
 U.S.A.

*Fate Magazine*  
 107 Future Way  
 Marion, Ohio 43302  
 U.S.A.

*INFO Journal*  
 7117 Baltimore Ave.  
 College Park, Maryland 20740  
 U.S.A.

*International UFO Reporter*  
 1969 Sherman Avenue  
 Suite 207  
 Evanston, Illinois 60201  
 U.S.A.

*The Journal of UFO Studies*  
 1969 Sherman Avenue  
 Suite 207  
 Evanston, Illinois 60201  
 U.S.A.

*Just Cause*  
 P.O. Box 4743  
 Arlington, Virginia 22204  
 U.S.A.

*The MUFON UFO Journal*  
 133 Willow Road  
 Tuguin, Texas 78155  
 U.S.A.



People, Dates, and Addresses

Ottawa: Mr. V. Mackie, F.P. Publications Ltd. Room 904,  
National Press Bldg., 150 Wellington Street, Ottawa,  
Ontario, 1977

Saskatoon: Mr. Brain C. Cannon, former CAPRO head, 1326  
E. Centre, Saskatoon, 1976

Ottawa: Mr. Arthur Bray, 1187 Agincourt Road, Ottawa,  
mgr. Canada Safty Council, 225-2099, 1977

Ottawa: Gill Bolger, see Michl. ( Barbara ) dir. MOT,  
1821 Walkley Rd. Apt. 18, Thane Student, Lee clk. D.P.W.,  
731-4547, 1976

Ottawa: Matthew J.R. Irwin, pub. service, Dept. of Commun-  
ications, 1159 Greenlawn Cres. 225-4484, 1976

Lloyd G. Cope ( Constance ) emp. MOT, 1343 Dorchester Ave.,  
728-5454, 1976

Ottawa: James Gilmore, ( Vera ) tech. offr. MOT, 46 Cote  
de Neiges Rd. (NT) 224-5839, 1976

Ottawa: Edward H. Leaver, employee gov't of Canada, 1286  
Albany Dr., 225-4049 1976

TORONTO. McKay, Henry, election, <sup>200</sup>Reboingh electric, 48<sup>200</sup> Beacham Cres. MIT INI

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 C Larsen . . . . . 596-9708  
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 G Beck . . . . . 596-9714  
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 Staffing/Classification Asst  
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 Miss K Burton . . . . . 596-9686/596-9322  
 Mrs L Steele . . . . . 596-9686/596-9322

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 Clerk C Belair . . . . . 596-9627/8

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 K J Kompster . . . . . 596-9622  
 Safety Officer . . . . . 596-9622  
 Guard Desk, Main Gate . . . . . 596-9314

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 Miss J Vaughn . . . . . 596-9308

ASSOCIATED SERVICES

OTTAWA DISTRICT OFFICE  
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 473 Albert Street  
 K1R 5B4

been assistant professor of geophysics at the University of Utah. His recent research has been in paleomagnetism, magnetic interpretation, and electrical properties of rocks. Dr. Shuey is a member of SEG, EAEG, AGU, GSA, and AAAS.



THOMPSON

DAVID D. THOMPSON received his B.S., M.S., and Ph.D. degrees in electrical engineering from the University of Michigan in 1965, 1966, and 1970, respectively. His major interests are in control theory and optimization procedures. Since leaving the University, he has been employed as a senior research engineer in seismic exploration at Atlantic Richfield's Research and Development Laboratory near Dallas, Texas. He is a member of Tau Beta Pi, Eta Kappa Nu, Sigma Xi, and IEEE.

JAMES R. WAIT was born in Ottawa, Canada, on January 23, 1924. From 1942-1945, he was a radar technician in the Canadian Army. He received his B.A.Sc. and M.A.Sc. degrees in engineering physics in 1948 and 1949, respectively, and his Ph.D. degree in electromagnetic theory in 1951, all from the University of Toronto, Toronto, Canada.

From 1948-1951, he was associated with Newmont Exploration Ltd., in New York, N.Y., and Jerome, Arizona; from 1952-1955 he was a section leader at



WAIT

Defence Research Telecommunications Establishment, Ottawa; and he joined the National Bureau of Standards, Boulder, Colorado, in 1955. In 1961, he was appointed adjunct professor of electrical engineering at the University of Colorado, Boulder. During 1960, he was a visiting research fellow at the Laboratory of Electromagnetic Theory in the Technical University of Denmark, Copenhagen. For the academic year 1966-67, he was a visiting professor at Harvard University, Cambridge, Massachusetts. From 1963-67, he was a senior research fellow at Boulder, where he was also a consultant to the director of the Institute for Telecommunication Sciences and Aeronomy. From 1967-70, he was senior scientist in the office of the director of the ESSA Research Laboratories, Boulder. In September of 1970, he became the senior scientist in the office of the director of the Institute of Telecommunication Sciences of the Office of Telecommunications. In October, 1971, he returned to his position in the office of the director of the Environmental Research Laboratories of NOAA (formerly designated ESSA), but remains as a consultant to the director of ITS. In addition, he is a fellow of the Cooperative Institute for Research in the Environmental Sciences. In May, 1971, Dr. Wait was a visiting professor at the Catholic University of Rio de Janeiro, Brazil, and in September, 1971, he was a guest of the U.S.S.R. Academy of Sciences in Moscow and Tbilisi.

## PERSONAL ITEMS

Ira R. Annoot has joined the state Data Processing Center, Houston, Whitehall Electronics, as sales representative. He was formerly sales manager for Houston Services of Houston.

Arnold A. Aylesworth has been transferred from the Atlantic Richfield Company from state Data Processing Center, Dallas, Texas to district geophysicist, Alaska District, Anchorage, Alaska.

John Buchanan has opened offices in London, England as a consulting geophysicist. He was formerly with British Petroleum as a senior research engineer.

John A. Donaldson has been transferred from Digicon Inc., Houston, Texas to Singapore. He will represent Digicon N.V. as area manager for South East Asia and Australia.

Marvin Ehrlich has been promoted to senior geophysicist with Shannon & Wilson, manager of that firm's Canadian subsidiary, Exploration Limited in Vancouver.

Charles D. Hier has retired as a geophysicist for Phillips Petroleum in Amarillo, Texas. He has opened a real estate office in Castle Rock, Colorado.

Robert C. Kendall has returned to Lakewood, Colorado, after completing a sabbatical leave of 20 months as head of interpretation studies for Petroleum Development Oman, Muscat, Oman.

L. A. Kimes has joined Westland Corporation as geophysicist. He was formerly a physical consultant in Houston, Texas.

Fred G. Knight has been transferred from state Data Processing Center, Houston, Texas to state Data Processing Center, Littleton, Colorado. He will be in a new position at the Research Center as research director.

Paul G. Mathieu has been transferred from state Data Processing Center, Houston, Texas to state Data Processing Center, Littleton, Colorado. He will be in a new position at the Research Center as research director.

(303) 491-8448.

Cooperative Institute for Research  
in the Atmosphere  
Colorado State University  
Foothills Campus  
Fort Collins CO 80523

**WILSON, John Tuzo.** O.B.E. (1946), M.A., Ph.D., D.Sc., LL.D., F.R.S.C.; university professor; b. Ottawa, Ont., 29 Oct. 1908; s. John Armitstead, C.B.E., and Henrietta Loettitia (Tuzo) W.; e. Trinity Coll., Toronto, B.A. 1930 (Massey Fellow, to Cambridge, 1930-32); Cambridge Univ., B.A. 1932, M.A. 1940, Sc.D. 1958; Princeton Univ., Ph.D. 1936; D.Sc., Univ. of W. Ont., 1958; LL.D., Carleton Univ., 1958; m. Isabel Jean Dickson, d. W. M. Linden Terrace, Ottawa, Ont., 29 Oct. 1938; two d., Patricia Isabel, Susan Loettitia Clark; PROF. OF GEOPHYSICS, UNIV. OF TORONTO, since 1946; Pres., Internat. Union of Geodesy & Geophysics, 1957-60; mem. Nat. Research Council of Can.; Asst. Geol., Geol. Survey of Can., 1936-39; spent summers prospecting and in field geol., 1924-39; served in World War, 1939-46; 2nd Lieut., R.C.E., 1939; Lieut. and Capt., 1st Candn. Tunnelling Co., overseas, 1940-41; Maj. and Lieut.-Col., Candn. Mil. Hdqrs. overseas, 1942-43; Col. and Dir., Operational Research, Nat. Defence Hdqrs., 1943-46; Depy. Dir., Exercise Muskox, 1945-46; awarded Am. Legion of Merit; mem. Arctic Inst. of N. Am. (Gov. and Chrmn. 1947); Candn. Geog. Soc. (Dir.); Candn. Inst. Mining & Metall.; Am. Geophys. Union; Candn. Assn. Physicists; Geol. Assn. of Can.; made 1st ascent of Mt. Hague, Montana (12,328 ft.) 1935; flew over North Pole, 1946; awarded Willet G. Miller Medal, Royal Soc. Canada, 1955; Selwyn G. Blaylock Medal, Candn. Inst. Mining & Metall., 1959; recreations: outdoor exercise, collecting books on Arctic; Home: 29 Roxborough St. E., Toronto, Ont.

**GARLAND, George David,** B.A.Sc., M.A., Ph.D., F.R.S.C. (1959); university professor; b. Toronto, Ont., 29 June 1926; s. Nicholas Lowrie and Jean Irene (McPherson) G.; e. Univ. of Toronto Schs. (1937-43); Univ. of Toronto, B.A.Sc. (Engn. Physics) 1947; M.A. 1948; St. Louis Univ., Ph.D. 1951; m. Elizabeth Peat d. A. S. MacMillan, Schumacher, Ont., 10 June 1949; children: Mary Isabelle, Nicholas; ASSOC. PROF. OF GEOPHYSICS, UNIV. OF ALBERTA, since 1957; Lectr. in Physics, Univ. of Toronto, 1949-52; Geophysicist, Dom. Observatory, Ottawa, 1952-54; Asst. Prof. of Geophysics, Univ. of Alberta, 1954; Fields of Research: structure of the earth's crust, gravity, magnetic variations, geophysical exploration; mem., Assn. Prof. Engrs. Ont.; Soc. of Exploration Geophysicists; Am. Geophysical Union; Conservative; Protestant; recreations: camping, photography, collecting of Canadiana; Home: 9110-116 St., Edmonton, Alta. *U. of T.*

G. D. GARLAND graduated from the University of Toronto in 1947 with the degree of B.A.Sc. in the Geophysics Option of Engineering Physics. He received the degree M.A. from the same University in 1948, doing his graduate research on gravity anomalies in the Canadian Shield. From 1948 to 1949 he was a Fellow in Geophysics at St. Louis University, and is at present working for his doctorate through that University. Since 1949 he has been lecturer in Geophysics at the University of Toronto. Mr. Garland has worked with the Dominion Observatory, Ottawa, for a number of seasons, on gravity and magnetic surveys in various parts of Canada. His particular interest is in the interpretation of potential field anomalies.

He is a member of the American Geophysical Union and the Association of Professional Engineers of Ontario, an associate member of the St. Louis Chapter of the Society of the Sigma Xi, and a student member of the Society of Exploration Geophysicists.



G. D. GARLAND

*1951*  
**JAMES R. WAIT** was born January 23, 1924, in Ottawa, Canada. He served as a radar technician in the Canadian Army during the last war. He was graduated from the University of Toronto in 1948 in engineering physics. Following this he was employed by the Hydro Electric Power Commission of Ontario Research Laboratories. In the spring of 1949 he obtained the M.A.Sc. degree in Engineering Physics from the University of Toronto. Since that time he has been employed by Newmont Exploration Ltd. of Jerome, Arizona.

Mr. Wait is a member of the Association of Professional Engineers of Ontario.

In addition, references are cited to earlier issues for the biographies of: R. A. Geyer, Vol. XIII, No. 4 (October, 1948), p. 649; W. E. Hollingsworth, Vol. XII, No. 2 (April, 1947) p. 298.

**JAMES R. WAIT** received the B.A.Sc., M.A.Sc., and Ph.D. degrees from the University of Toronto in 1948, 1949, and 1951, respectively.



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After some time geophysically prospecting in Arizona, he turned to electromagnetics in 1952 at the Radio Physics Laboratory in Ottawa. In 1955 he joined the National Bureau of Standards, and since then has been with the Boulder Laboratories of the U.S. Department of Commerce. His principal affiliation is now with the National Oceanic and Atmospheric Administration,

but he is also a Fellow of the Cooperative Institute for Research in Environmental Sciences, University of Colorado, as well as a professor adjoint in the Electrical Engineering Department of the University. In addition, he acts as consultant to the Office of Telecommunications.

In 1977 Dr. Wait was elected to the U.S. National Academy of Engineering.

particularly in the way our industrial complex has been shaped. It seems to me that the gut issue of broad national policy for science is political and economic, not scientific. Canada's future as an industrial country will not depend on the details of how scientists and engineers are organized and where they work in their laboratories and factories. It will, rather, depend on how well a few, at least, of our political leaders and senior public-service officials realize the importance of science and develop a real understanding of what science is all about, what the essential environmental conditions are for first-class scientific output, and how the authoritative voice of experienced science can best be presented – and really listened to – in the pre-decision deliberations of government.

<sup>1</sup>Mr Howe followed the us pattern of letting construction and operating contracts to private industry.

## Selected Biographical Index

**BALLARD, BRISTOW GUY** Head of electrical engineering in the Division of Physics, NRC, from 1930 to 1946. Assistant director of the Division of Physics and Electrical Engineering, NRC, 1946. Director of Radio and Electrical Engineering Division, NRC, 1948. Vice-president (scientific) of the NRC, 1954. President of the NRC, 1963–67.

**BANTING, FREDERICK GRANT** Co-discoverer (with C.H. Best) of insulin, 1921. Winner of the Nobel Prize in Medicine (with J.J.R. Macleod) in 1933. Director, Banting and Best Department of Medical Research, Toronto, 1923–41. Captain and major in the Canadian Army Medical Corps, 1939–41. Adviser to the director general of Medical Services, 1940. Member of the War Technical and Scientific Development Committee, 1940. Member of the NRC, 1937–41. First chairman of the Associate Committee on Medical Research, 1938; chairman of the Associate Committee on Aviation Medical Research, 1940. Died 21 February 1941, in a crashed bomber on the coast of Newfoundland.

**BELL, RALPH PICKARD** Appointed a member of the Executive Committee of the Department of Munitions and Supply, and director general of aircraft production, in 1940. A member of the Canadian section of the Joint Defence Production Committee, 1941. Appointed aircraft controller, 1942.

**BEST, CHARLES HERBERT** Co-discoverer (with Sir Frederick Banting) of insulin, 1921. Research associate in the Banting and Best Department of Medical Research, Toronto, from 1923 to 1941. Initiated the Canadian Serum Project – the development of dried human serum for military use – in 1939. Became

director of the Banting and Best Department of Medical Research in 1941, and was a surgeon captain in the RCN, as director of the RCN Medical Research Division, 1941-6. Member of the NRC, 1947-53.

**BOYLE, ROBERT WILLIAM** One of a small group of distinguished scientists who laid the foundations of research activities in the Royal Navy, with his war research in the Anti-submarine Division of the Admiralty Board of Inventions and Research, 1916-19. Director, Division of Physics and Electrical Engineering, NRC, 1929-49. Distinguished for his work on ultrasonics. His greatest contribution to Canada was in his selection of potential-leader staff for the NRC Division of Physics and Electrical Engineering, a long-continued process in which he seemed to be both inspired and infallible.

**BRAGG, SIR LAWRENCE** Winner of the Nobel Prize for Physics in 1915. Cavendish Professor of Physics at Cambridge, 1938-53. One of the high-ranking British scientists assigned to work as liaison officers to the NRC during the war.

**BURTON, E.F.** Wartime member of the NRC, when he was professor and head of the Department of Physics, and head of the McLennan Laboratory, at the University of Toronto.

**CAMBRON, ADRIEN** Joined the Division of Chemistry, NRC, as a research chemist in 1930. Became assistant director (1946) and co-director (1950) of the Division of Chemistry, and director of the Applied Chemistry Branch (1950).

**CAMPBELL, WALLACE RONALD** President, Ford Motor Company of Canada Limited, 1942; chairman of the board, 1946. Chairman of the War Supply Board. Member of the NRC, 1937-43.

**CAMSELL, CHARLES** Deputy minister of Mines and Resources, 1936-45. Member of the NRC, 1924-36. Member of the Territorial Council, Northwest Territories, 1921-35; commissioner, 1935-46.

**COCKCROFT, SIR JOHN** Fellow, St John's College, Cambridge, 1928-46; professor of Natural Philosophy, Cambridge, 1939-46. Chief superintendent, Air Defence Research and Development Establishment, Ministry of Supply (UK), 1941-4; member of the Tizard Mission, 1940; director of the Atomic Energy Division, NRC, 1944-6. Winner of the Nobel Prize for Physics, 1951.

**COLLIP, JAMES BERTRAM** Member of the NRC from 1938 to 1946, when he was professor of Biochemistry and director of the department, McGill University

(1928-41), and Gilman Professor of Endocrinology and director of the Research Institute, McGill (1941-7). Director of the Division of Medical Research, NRC, 1946-57.

**COOK, WILLIAM HARRISON** Joined the NRC as a research scientist in 1930. Director, Division of Biosciences, NRC, 1941-68. Executive director, NRC, 1967. Serves on federal, interdepartmental, and NRC committees concerned with agriculture, scientific research, and university-support programs. Chairman of the Standing Committee on Grants and Scholarships, NRC. Research interests range from applied work on refrigerated storage and transport of foods to basic biochemical studies on proteins and lipoproteins. Has published more than 150 scientific and technical papers.

**DONALD, JAMES RICHARDSON (RITCHIE)** Director general of chemicals and explosives in the Department of Munitions and Supply, 1939-45; director general of chemicals and explosives in the Department of Defence Production, 1951-2.

**DUNCAN, JAMES STUART** Career in Massey-Harris-Ferguson Company Limited, concluding as president and chairman of the Board, 1909-56. Acting deputy minister of National Defence for Air, 1940. Member of the NRC, 1943-49. Director, Atomic Energy of Canada Limited, 1957.

**EAGLESON, STANLEY PRESTON** Clerk of the NRC, 1917-22; secretary of the NRC, 1922-6; secretary-treasurer of the NRC, 1926-45; general secretary of the NRC, 1946-57.

**EULER, THE HONOURABLE WILLIAM DAUM** Federal minister of Trade and Commerce, 23 October 1935 to 8 May 1940.

**FETHERSTONHAUGH, EDWARD PHILLIPS** Dean of Engineering and Architecture, University of Manitoba, 1923-49. Director of the radio technicians' course for the RCAF, 1941. Member of the NRC, 1938-46.

**FIELD, GEORGE SYDNEY** Research physicist in the Division of Physics and Electrical Engineering, NRC, from 1930 to 1946. Head of the acoustics laboratory, 1934. In 1941, was in the UK investigating anti-submarine and anti-mining devices for the NRC and the RCN. During the war, directed research on underwater warfare and acoustical aspects of telecommunications systems for all three services. Naval Research adviser to the Defence Research Board, 1947. Deputy director general, DRB, 1948. Chief of Division "A," in charge of naval and telecommunications research, and scientific adviser to chief of the Naval Staff, 1952. Chief scientist to the DRB, 1954. Vice-chairman, DRB, 1964-6.