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Attachment A

Résumés of Commission Members

The Honorable Duane P. Andrews

Mr. Andrews is Corporate Executive Vice President and Director, Science Applications International Corporation (SAIC) (1993 to present). He previously was an officer in the United States Air Force (1967-77), a professional staff member with the House Permanent Select Committee on Intelligence (1977-89), and the Assistant Secretary of Defense for Command, Control, Communications and Intelligence (1989-93). Mr. Andrews was awarded the Department of Defense Medal for Distinguished Public Service and the National Intelligence Distinguished Service Medal.

Mr. Robert V. Davis

Mr. Davis is President of R.V. Davis & Associates (1997 to present). He previously was a professional staff member of the House Appropriations Committee (1977-95) and Deputy Under Secretary of Defense for Space (1995-97). Mr. Davis was awarded the Secretary of Defense Medal for Outstanding Public Service (1997).

General Howell M. Estes, III, United States Air Force (Retired)

General Estes is President of Howell Estes & Associates, Inc. (1998 to present) and serves as Vice Chairman of the Board of Trustees, The Aerospace Corporation. He entered the United States Air Force in 1965 and served for 33 years. At the time of his retirement in 1998, General Estes was Commander in Chief, North American Aerospace Defense Command, Commander in Chief, United States Space Command, and Commander, Air Force Space Command. He previously served as a consultant to the Defense Science Board Task Force on Space Superiority (1999).

General Ronald R. Fogleman, United States Air Force (Retired)

General Fogleman is president and chief operating officer of the B Bar J Cattle and Consulting Company, Durango Aerospace Incorporated, and a partner in Laird and Company, LLC (1998 to present). He entered the United States Air Force in 1963 and served for 34 years. At the time of his retirement in 1997, General Fogleman was Chief of Staff of the U.S. Air Force. He previously served as the Commander in Chief of the U.S. Transportation Command (1992-94). He serves on the Boards of Directors for International Airline Service Group, DERCO Aerospace, EAST Inc., Mesa Air Group, MITRE Corporation, North American Airlines, Rolls-Royce North America, and World Airways. General Fogleman is a member of the Council on Foreign Relations.

Lieutenant General Jay M. Garner, United States Army (Retired)

General Garner is President of SY Technology (1997 to present). He entered the United States Army in 1962 and served for 35 years. Prior to leaving military service in 1997, he served as Assistant Vice Chief of Staff of the Army (1996-97). Previously he was the Commander of the U.S. Army Space and Strategic Defense Command (1994-96).

The Honorable William R. Graham

Dr. Graham is the Chairman of the Board and President of National Security Research, Inc. (1997 to present). He previously served as the Deputy Administrator of the National Aeronautics and Space Administration (1985-86), Science Advisor to President Reagan and Director of the White House Office of Science & Technology Policy (1986-89), and Member of the Commission to Assess the Ballistic Missile Threat to the United States (1998). He has a Ph.D. in electrical engineering.

General Charles A. Horner, United States Air Force (Retired)

General Horner is a business consultant, author and national defense advisor (1994 to present). He entered the United States Air Force in 1958 and served for 36 years. He served as Commander in Chief, North American Aerospace Defense Command, Commander in Chief, United States Space Command, Commander, Air Force Space Command, and he commanded Allied Air Forces during the 1991 Gulf War.

Admiral David E. Jeremiah, United States Navy (Retired)

Admiral Jeremiah is President of Technology Strategies & Alliances Corporation (1994 to present). Prior to leaving military service in 1994, he served as Vice Chairman, Joint Chiefs of Staff (1990-94) for Generals Powell and Shalikashvili. He serves on the Boards of Directors for several firms, including Litton Industries, Alliant Techsystems Inc., Getronics Government Systems, LLC and Geobiotics, Inc. Admiral Jeremiah serves on various national security and intelligence panels, boards and commissions, including the Defense Policy Board, and a National Reconnaissance Office Advisory Panel.

General Thomas S. Moorman, Jr., United States Air Force (Retired)

General Moorman is a Partner in Booz-Allen Hamilton (1998 to present). He also serves as a member of the Board of Trustees for The Aerospace Corporation, is an Outside Director on the Board of Smiths Industries and is a member of the Defense Policy Board Advisory Committee. He entered the United States Air Force in 1962 and served for 35 years. General Moorman served as Commander of Air Force Space Command (1990-92). At the time of his retirement in 1997, General Moorman was Vice Chief of Staff, United States Air Force. He is a member of the Council on Foreign Relations.

Mr. Douglas H. Necessary

Mr. Necessary is an independent management consultant. He has recently served on several government boards. He served on active duty in the U.S. Army from 1964-1984 and as a professional staff member of the Committee on Armed Services, U.S. House of Representatives (1984-2000).

General Glenn K. Otis, United States Army (Retired)

General Otis serves as a consultant for many defense firms and serves on the Defense Science Board and Ballistic Missile Defense Advisory Committee. Previously he was Senior Vice President of Coleman Research Corporation (1988-96) and Chairman of the Board on Army Science and Technology at the National Academy of Sciences. He entered the United States Army in 1946 and served for 42 years. Prior to leaving military service in 1988, he served as Commander in Chief, U.S. Army Europe and 7th Army, and Commander, NATO's Central Army Group (1983-88). Previously he commanded the U.S. Army's Training and Doctrine Command (1981-83).

The Honorable Donald H. Rumsfeld*

Mr. Rumsfeld is currently in private business. He serves as Chairman of the Board of Directors of Gilead Sciences, Inc., and on the Boards of Directors of a number of corporations and non-profit organizations. Previously he served as CEO of G.D. Searle & Co. and of General Instruments Corporation, and in a variety of U.S. government posts, including: Naval Aviator, Member of U.S. Congress, U.S. Ambassador to NATO, White House Chief of Staff, Secretary of Defense, Presidential Envoy to the Middle East and Chairman of the Commission to Assess the Ballistic Missile Threat to the United States. He received the Presidential Medal of Freedom, the nation's highest civilian award, in 1977.

Senator Malcolm Wallop (Retired)

Senator Wallop is currently a Senior Fellow with the Heritage Foundation and chairs Frontiers of Freedom, a non-profit public policy organization he established in January 1995. Previously he served as a U.S. Senator from Wyoming (1977-95). In 1977 he was the first elected official to propose a space-based missile defense system. Prior to serving in the U.S. Senate, he was a rancher, a businessman, and a member of the Wyoming Legislature (1969-76).

^{*} The Honorable Donald H. Rumsfeld served as a member and chairman of the Commission from its inception until December 28, 2000, when he was nominated for the position of Secretary of Defense by President-elect George W. Bush.

Attachment B

Résumés of Core Staff of the Commission

Dr. Stephen A. Cambone, Staff Director. Research Director, Institute for National Strategic Studies, National Defense University (1998 to present). Staff Director, Commission to Assess the Ballistic Missile Threat to the United States (1998); Senior Fellow, Center for Strategic and International Studies (1993-98); Director, Strategic Defense Policy, Office of the Secretary of Defense (1990-93); Deputy Director of Strategic Analysis, SRS Technologies (1986-90); Staff Analyst, Los Alamos National Laboratory (1982-86). Ph.D. in political science.

D. Craig Baker, Staff Member. Special Assistant to the Chief Scientist, U.S. Army Space and Missile Defense Command (1999-2000); Concepts and Initiatives Division Chief, Army Space and Missile Defense Battle Lab (1997-98); Plans Director, Army Space Command (1996-97); Space Integration Division Chief, Army Space Command (1990-96); Army Research Fellow, RAND Arroyo Center (1986-88). M.S. in national security strategy. M.S. in systems management.

Barbara Bicksler, Staff Member. Senior Policy Analyst, Strategic Analysis, Inc. (1996 to present). Research Staff Member, Institute for Defense Analyses (1986-95); Analyst, Office of the Assistant Secretary of Defense for Program Analysis and Evaluation (1981-84). Master in Public Policy.

Linda L. Haller, Staff Member. Assistant Bureau Chief (1999 to present) and Senior Legal Advisor (1997-99), International Bureau, Federal Communications Commission (FCC); Senior Counsel, Office of General Counsel, FCC (1994-97); Attorney Advisor, FCC (1991-92); Associate, Morgan Lewis & Bockius (1988-90); Associate, Pierson, Ball & Dowd (1986-88). Juris Doctor.

Delonnie Henry, Staff Member. Committee Clerk, U.S. House Select Committee on U.S. Technology Transfers to the People's Republic of China (1998-99); Commission to Assess the Ballistic Missile Threat to the United States (Rumsfeld Commission) (1998); National Defense University (1993-98). M.Ed.

John Luddy, Staff Member. Senior Policy Advisor, U.S. Senator Jon Kyl (1999-2000); Senior Legislative Assistant, U.S. Senator Bob Smith (1997-99); Military Legislative Assistant, U.S. Senator James Inhofe (1995-97); Defense Policy Analyst, The Heritage Foundation (1992-95); U.S. Marine Corps (1986-89). M.S. in international relations.

Lieutenant Colonel J. Kevin McLaughlin, United States Air Force, Staff Member. Commander, 2d Space Operations Squadron (1998-2000); Chief, Space/Missile Branch, Legislative Liaison (1996-98); Chief, Space Policy, Assistant Secretary of the Air Force (Space) (1995-96); Titan Launch Controller/Deputy for Standards/Evaluation, 45th Space Wing (1991-94). M.A. in space systems management.

William E. Savage, Staff Member. Director of Strategic Development for Space Programs, Litton TASC (1994 to present). National Reconnaissance Office (1986-94); U.S. Air Force Space Program (1967-86). M.S. in astrogeophysics.

G. Randall Seftas, Staff Member. Project Manager/Lead Engineer, National Aeronautics and Space Administration (1994-Present); Senior Research Engineer, Lockheed Missiles and Space Company (1989-94); Spacecraft Systems Engineer, Booz-Allen & Hamilton (1988-89); Operational Space Systems Engineer, GE Space Systems Division (1984-88). B.S. in aerospace engineering.

Thomas L. Wilson, Jr., Staff Member. Deputy Head, Program Coordination and Liaison Office, Naval Center for Space Technology (1997 to present). Program Manager, Naval Research Laboratory (1992-2000). Professional Staff, Office of the Deputy Under Secretary of Defense for Space (1996-98). B.S. in aerospace engineering.

Department of Defense Liaison

Architect.

Major General H. J. "Mitch" Mitchell, United States Air Force.

Department of Defense Liaison to the Commission to Assess United States

National Security Space Management and Organization and Special

Assistant to the Assistant Secretary of Defense for Command, Control,

Communications and Intelligence. Former National Security Space

Attachment C

Commission Meetings

July 11, 2000

The Honorable Arthur L. Money Assistant Secretary of Defense for Command, Control,

Communications and Intelligence and DoD Chief

Information Officer

July 26, 2000

The Honorable Porter J. Goss Co-Chairman, National Commission for the Review of

the National Reconnaissance Office and Chairman, Permanent Select Committee on Intelligence, U.S.

House of Representatives

The Honorable J. Robert Kerrey Co-Chairman, National Commission for the Review of

the National Reconnaissance Office and former Vice Chairman, Select Committee on Intelligence, U.S.

Senate

Mr. Ken Colucci Chief of Staff, National Commission for the Review of

the National Reconnaissance Office

Mr. Art Grant Executive Staff Director, National Commission for the

Review of the National Reconnaissance Office

July 27, 2000

The Honorable Edward C. "Pete"

Aldridge

Chief Executive Officer, The Aerospace Corporation and former Secretary of the Air Force and Director of the

National Reconnaissance Office

August 7, 2000

Mr. Lawrence K. Gershwin National Intelligence Officer for Science and

Technology, National Intelligence Council

Mr. Marc Berkowitz Director of Space Policy, Office of the Assistant

Secretary of Defense for Command, Control,

Communications and Intelligence

August 8, 2000

LTG John Costello, U.S. Army Commanding General, U.S. Army Space & Missile

Defense Command

VADM Richard Mayo, USN Deputy Director, U.S. Navy Space Information Warfare

Command & Control

August 23, 2000

LtGen Emil R. Bedard, USMC Deputy Chief of Staff for Plans, Policies and Operations,

Headquarters, U.S. Marine Corps

Maj Gen H. Marshall Ward, USAF Director, Special Programs, Office of the Under

Secretary of Defense for Acquisition, Technology and

Logistics

The Honorable Keith Hall Assistant Secretary of the Air Force for Space and

Director of the National Reconnaissance Office

Mr. David A. Kier Deputy Director, National Reconnaissance Office

August 24, 2000

Mr. Richard L. Shiffrin Deputy General Counsel (Intelligence), Department of

Defense

Mr. W. Harvey Dalton Associate Deputy General Counsel (International Affairs

and Intelligence), Department of Defense

Mr. Richard K. Sylvester Assistant Deputy Undersecretary of Defense (Systems

Acquisition)

The Honorable John Hamre President and Chief Executive Officer, Center for

Strategic and International Studies and former Deputy

Secretary of Defense

Mr. James M. Simon, Jr. Assistant Director of Central Intelligence for

Administration

Mr. Larry Kindsvater Executive Director, Intelligence Community Affairs,

Office of the Director of Central Intelligence

Mr. Charles Allen Assistant Deputy Director of Central Intelligence for

Collection, Office of the Director of Central Intelligence

Mr. John Gannon Assistant Deputy Director of Central Intelligence for

Production and Analysis, Office of the Director of

Central Intelligence

September 19, 2000

Lt Gen Robert H. Foglesong, USAF Deputy Chief of Staff for Air and Space Operations

Brig Gen Daniel P. Leaf, USAF Director of Operational Requirements

Gen Michael E. Ryan, USAF Chief of Staff, United States Air Force

Maj Gen Brian A. Arnold, USAF Director of Space and Nuclear Deterrence, Office of the

Secretary of the Air Force for Acquisition

The Honorable Arthur L. Money Assistant Secretary of Defense for Command, Control,

Communications and Intelligence and DoD Chief

Information Officer

Mr. Kenneth F. Colucci Chief of Staff, National Commission for the Review of

the National Reconnaissance Office

Mr. Arthur V. Grant Executive Staff Director, National Commission for the

Review of the National Reconnaissance Office

September 20, 2000

Mr. Kevin M. O'Connell Executive Secretary, National Imagery and Mapping

Agency Commission

Lt Gen Michael V. Hayden, USAF Director, National Security Agency

Mr. Robert R. Soule Director, Program Analysis & Evaluation, Office of the

Secretary of Defense

LTG Edward G. Anderson, III, U.S. Army Director for Strategic Plans & Policy (J-5), the Joint Staff

LTG James C. King, U.S. Army Director, National Imagery and Mapping Agency

September 27, 2000

Mr. Larry Kindsvater Executive Director, Intelligence Community Affairs,

Office of the Director of Central Intelligence

Mr. James M. Simon, Jr. Assistant Director of Central Intelligence for

Administration

Gen Larry D. Welch, USAF (Ret.) President, Institute for Defense Analysis and former

Chief of Staff of the Air Force

Mr. Lawrence K. Gershwin National Intelligence Officer for Science and

Technology, National Intelligence Council

September 28, 2000

Ms. Cheryl Roby Deputy Assistant Secretary of Defense for Programs and

Evaluation, Office of the Assistant Secretary of Defense

for Command, Control, Communications and

Intelligence

The Honorable William S. Cohen Secretary of Defense

The Honorable Rudy de Leon Deputy Secretary of Defense

Gen Richard B. Myers, USAF Vice Chairman, Joint Chiefs of Staff

The Honorable Joan A. Dempsey Deputy Director of Central Intelligence for Community

Management

October 11, 2000

Mr. Albert E. Smith Executive Vice President, Lockheed Martin Space

Systems Company

Mr. James W. Evatt Executive Vice President, Boeing Space and

Communications Group and President, Government

Systems

Mr. Tig H. Krekel President and Chief Executive Officer, Hughes Space

and Communications Company

Mr. Timothy W. Hannemann Executive Vice President and General Manager, TRW

Space and Electronics Group

October 12, 2000

The Honorable R. James Woolsey Partner, Shea & Gardner and former Director of

Central Intelligence

RADM J. J. Quinn, USN Commander, Naval Space Command

The Honorable James R. Schlesinger Senior Advisor, Lehman Brothers and former Secretary

of Defense, former Secretary of Energy, former Director

of Central Intelligence

October 17, 2000 Buckley Air Force Base, Denver, Colorado

Lt Gen Roger G. DeKok, USAF Vice Commander, Air Force Space Command

October 18, 2000 Peterson Air Force Base, Colorado Springs, Colorado

Lt Gen Roger G. DeKok, USAF Vice Commander, Air Force Space Command

Lt Gen Eugene L. Tattini, USAF Commander, Space and Missile Systems Center

Maj Gen Richard W. Davis, USAF Director, National Security Space Architect, Office of the

Assistant Secretary of Defense for Command, Control,

Communications and Intelligence

Gen C. W. Fulford, Jr., USMC Deputy Commander in Chief, U.S. European Command

COL (P) Richard V. Geraci, U.S. Army

Deputy Commanding General, Army Space, U.S. Army

Space and Missile Defense Command

Maj Gen Thomas C. Waskow, USAF Director of Air and Space Operations, Headquarters

Pacific Air Forces

Lt Gen Maxwell C. Bailey, USAF Commander, Air Force Special Operations Command

LTG Daniel G. Brown, U.S. Army Deputy Commander in Chief, U.S. Transportation

Command

RADM Martin J. Mayer, USN Director for Strategy, Requirements and Integration

(J-8), U.S. Joint Forces Command

RADM Paul Sullivan, USN Director for Plans (J-5), U.S Strategic Command

MG Gary D. Speer, U.S. Army Deputy Commander in Chief, U.S. Southern Command

October 19, 2000 Peterson Air Force Base, Colorado Springs, Colorado

Maj Gen William R. Looney, III, USAF Component Commander, U.S. Air Force Space

Operations, U.S. Space Command

COL (P) Richard V. Geraci, U.S. Army Deputy Commanding General, Army Space, U.S. Army

Space and Missile Defense Command

CAPT Victor Cerne, USN Joint Information Operations Center, U.S. Space

Command

Col John T. Hill, USMC Deputy, Naval Space Command

LTG Edward G. Anderson, III, U.S. Army Deputy Commander in Chief and Chief of Staff, U.S.

Space Command

Lt Gen George E.C. Macdonald,

Canadian Forces

Deputy Commander in Chief, North American

Aerospace Defense Command

Gen Ralph E. Eberhart, USAF Commander in Chief, U.S. Space Command,

Commander in Chief, North American Aerospace Defense Command and Commander, Air Force Space

Command

October 25, 2000

Dr. David Whelan Director, Tactical Technology Office, Defense Advanced

Research Projects Agency

Lt Gen George K. Muellner, USAF (Ret.) Vice President and General Manager-Phantom Works,

The Boeing Company and former Principal Assistant to

the Secretary of the Air Force for Acquisition

Mr. David A. Kier Deputy Director, National Reconnaissance Office

Mr. Peter A. Marino Chairman, National Imagery and Mapping Agency

Commission

October 26, 2000

The Honorable Robert M. Gates Interim Dean, George Bush School of Government and

Public Service, Texas A&M University and former

Director of Central Intelligence

October 31, 2000

Mr. Robert S. Zitz Director, Initiatives Group, National Imagery and

Mapping Agency

Mr. Fred Faithful Director of Analysis and Plans, National Imagery and

Mapping Agency

Mr. James M. Simon, Jr. Assistant Director of Central Intelligence for

Administration

Lt Gen Bruce Carlson, USAF Director for Force Structure, Resources, and Assessment

(J-8), the Joint Staff

Mr. David A. Kier Deputy Director, National Reconnaissance Office

Dr. Lawrence J. Delaney Assistant Secretary of the Air Force for Acquisition

Lt Gen Ronald T. Kadish, USAF Director, Ballistic Missile Defense Organization

November 1, 2000

Mr. Andrew W. Marshall Director, Net Assessment, Office of the Secretary of

Defense

Dr. Taylor Lawrence Vice President, Products and Technology, Northrop

Grumman Corporation and former Staff Director, U.S.

Senate Select Committee on Intelligence

Mr. David Thompson President and Chief Executive Officer, Spectrum Astro

Gen Richard B. Myers, USAF Vice Chairman, Joint Chiefs of Staff

Mr. John Copple Chief Executive Officer, Space Imaging

November 14, 2000

VADM Lyle G. Bien, USN (Ret.) Vice President, Government Programs, Teledesic LLC

November 15, 2000

Brig Gen Douglas J. Richardson, USAF Commander, Space Warfare Center, Air Force Space

Command, Schriever Air Force Base, Colorado

November 28, 2000

Commission Business

November 29, 2000

The Honorable Daniel S. Goldin Administrator, National Aeronautics and Space

Administration

November 30, 2000

Commission Business

December 5, 2000

The Honorable George J. Tenet

Director of Central Intelligence

December 12, 2000

Commission Business

December 18, 2000

Commission Business

December 19, 2000

Commission Business

January 3, 2001

Commission Business

January 4, 2001

Commission Business

January 10, 2001

Commission Business

January 11, 2001

Deliver Report

Attachment D

Acknowledgements

The Commissioners wish to express their appreciation to the men and women of the U.S. Government national security space community who took time to discuss national security space organization and management with the Commissioners and the Commission Staff.

In particular, the Commissioners express their thanks to the Honorable Arthur L. Money, Assistant Secretary of Defense for Command, Control, Communications and Intelligence in the Office of the Secretary of Defense and the Honorable Keith Hall, Director of the National Reconnaissance Office.

Special thanks are extended to Major General H. J. "Mitch" Mitchell, USAF, the Department of Defense Liaison to the Commission. His knowledge of the current organization and management of national security space and his persistence in obtaining information for the Commission made its task much easier than it might have been.

The Commissioners would also like to thank the organizations that detailed personnel to staff the Commission: National Defense University, United States Air Force, U.S. Army Space and Missile Defense Command, Naval Research Laboratory, Federal Communications Commission, Goddard Space Flight Center and Central Intelligence Agency.

The National Reconnaissance Office and the Department of Defense's Washington Headquarters Services provided excellent administrative and logistical support under difficult time constraints. Thanks also are extended to the Central Intelligence Agency's Printing and Photography Group, which assisted in the design and publication of this report.

Attachment E

Glossary for Organization Charts

AF Air Force

AFMC/CC Commander, Air Force Materiel Command

AFRL Air Force Research Laboratory

AFSPC/CC Commander, Air Force Space Command ASAF Assistant Secretary of the Air Force

ASAF(A) Assistant Secretary of the Air Force (Acquisition)
ASD (C3I) Assistant Secretary of Defense (Command, Control,

Communications, Intelligence)

C3 Command, Control, Communications

C3ISR Command, Control, Communications, Intelligence

Surveillance and Reconnaissance

CIA Central Intelligence Agency

CINCNORAD Commander in Chief, North American Aerospace

Defense Command

CINCSPACE Commander in Chief, United States Space Command

CIO Chief Information Officer
CJCS Chairman, Joint Chiefs of Staff
CMS Community Management Staff
CSAF Chief of Staff of the Air Force

DAC Designated Acquisition Commander

DARPA Defense Advanced Research Projects Agency

DCI Director of Central Intelligence

DDCI/CM Deputy Director of Central Intelligence/Community

Management

DepSecDef Deputy Secretary of Defense

DNRO Director, National Reconnaissance Office

FBI Federal Bureau of Investigation

J2 Directorate for Intelligence

NRO National Reconnaissance Office

NSSA National Security Space Architect

OSR Office of Strategic Reconnaissance

PEO Program Executive Officer

SAF/US Under Secretary of the Air Force

SecAF Secretary of the Army
SecArmy Secretary of the Army
SecDef Secretary of Defense
SecNav Secretary of Navy

SMC/CC Commander, Space and Missile Systems Center

USD Under Secretary of Defense