

**DEPARTMENT OF THE INTERIOR**

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**In the Matter of:**

**MEETING OF NATIONAL PETROLEUM COUNCIL**

**Place — Washington, D. C.**

**Date — Thursday, October 4, 1962**

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DEPARTMENT OF THE INTERIOR

MEETING OF NATIONAL PETROLEUM COUNCIL

Department of Interior Auditorium  
Washington, D.C.  
Thursday, October 4, 1962

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**GOVERNMENT OFFICIALS PRESENT:**

(Department of the Interior Representatives)

Hon. Stewart L. Udall, Secretary of the Interior

Hon. James K. Carr, Under Secretary

Hon. John M. Kelly, Assistant Secretary - Mineral Resources  
(Office of Oil and Gas)

Jerome J. O'Brien, Director

Frederick S. Lott, Assistant Director

John Ricca, Assistant Director

Mrs. Bernice K. Lort, Special Assistant to the Director

Robert E. Abel, Co-Chairman, Working Subcommittee of N.P.C.  
Committee on Oil Exports from Soviet Bloc.

H.J. Barton, Program Division.

C. Marvin Case, Program-Foreign

William J. Darby, Program-Foreign

Mark S. Eken, Program-Foreign

Earl G. Eilerbrake, Transportation & Storage

Mac Goodman, NATO

Paul L. Hopper, Mobilization Planning

Charles L. Moore, Foreign Production

C.A. Nichols, Jr., Voluntary Agreement Operations

Jos. J. Simmons, III, Domestic Production

Russell W. Slight, Administrative

Ben Tafoya, Mobilization Planning

Forrest F. Trantham, Gas Transmission & Distribution

Phillip R. Wheeler, Refining

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Paul B. Whitney, Programming Operations

(Office of the Secretary)

Robert E. Day, Staff Assistant

Robert McConnell, Assistant to the Secretary for Congressional Liaison

John F. O'Leary, Special Assistant to the Assistant Secretary-Mineral Resources

(U.S. Geological Survey)

Thomas B. Nolan, Director

(Bureau of Mines)

Carl C. Anderson, Chief, Petroleum Division

Paul Zinner, Acting Deputy Director

(Bureau of Land Management)

Karl S. Landstrom, Director

(Solicitor's Office)

A. Bruce Wright, Assistant Solicitor

Henry Rubin, Attorney

Robert W. Long, Attorney

(Resources Program Staff)

E. H. Montgomery

(Division of Information)

Gene Nicolai, Senior Information Officer

(Office of Minerals Exploration)

George Fumich, Jr., Director

(Oil Import Administration)

J. Cordell Moore, Administrator

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Ralph W. Snyder, Jr.

DEPARTMENT OF AGRICULTURE

(Agriculture Stabilization & Conservation Service)

Bruce H. Easton, Assistant to Deputy Administrator for  
Price & Products.

Clyde F. Clark, Industrial Specialist, Price Division.

(Division of Recreation & Land Uses)

John Sicker, Director

DEPARTMENT OF COMMERCE

(Bureau of International Programs)

Ernest Rubin, Director, Sino-Soviet Division

(Bureau of Foreign Commerce)

W. N. Chamberlen, Miscellaneous Metals & Minerals Div.

(Office of Emergency Transportation)

C. K. Faught, Jr., Acting Director.

(Maritime Administration)

William Allen, Chief, Division of Operations

AGENCY FOR INTERNATIONAL DEVELOPMENT AID

John Tannhauser, Petroleum Adviser

CENTRAL INTELLIGENCE AGENCY

Hugh Lamberth *Dr. John Hoyt*

DEPARTMENT OF JUSTICE

William J. Lamont, Antitrust Division.

DEPARTMENT OF STATE

Stewart D. Nelson, Fuels & Energy Div.,  
Office of International Resources

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## DEPARTMENT OF DEFENSE

(Office of Assistant Secretary of Defense -  
Installations & Logistics)

Vice Adm. Burton B. Biggs, USN (Ret.)  
Director, Petroleum Logistics Policy

(Defense Petroleum Supply Agency)

Col. Leon Stann, USAF, Acting Commander

Col. Robert W. Beers, Director, Plans Div.

(Department of the Navy)

Hon. Fred Korth, Secretary

Captain Blaine, Aide to Secy. Korth.

(Naval Petroleum & Oil Shale Reserves)

Capt. Kenneth C. Lovell, CEC, USN, Director.

## FEDERAL POWER COMMISSION

Hon. Lawrence J. O'Connor, Jr., Vice Chairman.

## TREASURY DEPARTMENT

Eban Hanney

## OFFICE OF EMERGENCY PLANNING

Joseph Lerner, Office of Economic Development

Selig Ginsberg, Chief, Energy and Water Resources Div.,  
Industry and Finance Office

Burton Derow, Economist, Energy and Water Resources Div.,  
Industry and Finance Office

Legislative Representatives

(Committee on the Judiciary, United States Senate)

Mr. Joseph A. Davis, Chief Clerk

Miss Patricia Connell, Counsel, Committee on Interior  
and Insular Affairs, U. S. Senate

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~~Hon. Clinton P. Anderson, Chairman.~~

Mr. Stewart French, General Counsel

(Select Committee on Small Business, House of Representatives)

Dr. Justinus Gould, Counsel.

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NATIONAL PETROLEUM COUNCIL MEMBERS PRESENT

Leonard L. Aitken

Earl Baldrige

F. M. Banks

Paul G. Benedum

Fred E. Bergfors, Sr.

Jacob Blaustein

Reid Brazell

J. S. Bridwell

E. D. Brockett

Bruce K. Brown

E. O. Buck

Mark V. Burlingame, Executive Vice President,  
Natural Gas Pipeline Company of America

Orville S. Carpenter

James Comerford

D. L. Connelly

George R. Copeland

William F. Crossett, President, National Tank Truck  
Carriers, Incorporated

Morgan J. Davis

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Harold Decker, President, Independent Petroleum Assn.  
of America

J. C. Donnell, II

Warwick M. Downing

Elmer Batzell (for Mr. James P. Dunnigan)

Paul Endacott

R. G. Follis

Thomas J. Fountain, Jr.

Stark Fox

George F. Getty, III, President, Tidewater Oil Company

Russell H. Green

Jake L. Hamon

John Harper

Paul N. Howell

Harry A. Jackson

A. Jacobsen

Charles S. Jones

J. Paul Jones

Howard Boyd (for Paul Kayser)

W. W. Keeler

L. E. Kincannon, President, National Petroleum Refiners  
Association

J. H. Pipkin (for Augustus C. Long)

D. K. Ludwig

L. F. McCollum

W. J. McWilliams, President, Petroleum Equipment Suppliers  
Association



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William G. Maguire

B. L. Majewski

J. Howard Marshall

R. L. Milligan

Bruce Brown (for Charles H. Murphy, Jr., President,  
Murphy Corporation)

Albert L. Nickerson

S. F. Niness *(Note)*

J. R. Parton

Frank M. Porter

L. T. Potter

George Piercy (for M. J. Rathbone)

C. Pratt Rather

A. S. Ritchie

M. H. Robineau

A. H. Rowan

Thomas J. Scott, Member, Executive Committee,  
New England Fuel InstituteE. Morris Seydell, President, National Stripper Well Assn.  
*Executive Committee*

Clyde Foster (for Charles E. Spahr)

E. L. Steiniger, President, Sinclair Oil Corporation

W. Webb (for Henderson Supplee, Jr)

Richard Nelson (for John E. Swearingen)

W. W. Vandever *(Note)*

Richard L. Vockel

H. R. Wagner, Director, Petroleum Division,  
Farmers Union Central Exchange, Inc.

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J. Ed Warren

Everett F. Wells

W. C. Whaley

Joseph Whiteman (for S. D. Whiteman)

Robert F. Windfohr

John G. Winger, Vice President, The Chase Manhattan Bank

*John H. White (for John H. White)*

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P R O C E E D I N G S

9:30 AM

ACTING CHAIRMAN R. G. FOLLIS: Gentlemen, the meeting will come to order, please.

We are going to rearrange our program slightly. We have three distinguished visitors here who are obliged to leave very quickly, and so rather than going through our normal procedure of calling the roll and bringing the meeting to order, I am going to ask our visitors to speak to us first and then we will go into our normal procedure.

We have with us today Secretary of the Interior Udall; Secretary of the Navy Fred Korth; and Under Secretary of the Interior James Carr.

Before I call on <sup>c</sup>Secretary Udall I would like to express, again, the appreciation of this Council for the cooperation and support that he and his department, particularly Secretary Kelly, have carried forward in the last ten months, in assisting us in clarifying the status of the Council under the proclamations that the President made last February.

As you all know, this has been a matter of serious concern to the Council, and during the time that I have been carrying on in place of Mr. Hallanan, it has become very clear to me the immense interest and support that the Secretary has had and has given us in relation to this matter. I am sure that the fine, clear opinion that we obtained from

j6 the Department of Justice on the matter of conflict of interest was something that came from very conscientious and very strong support and help from the Department of the Interior.

And for that, Mr. Secretary, we all want to express our appreciation.

(Applause)

STATEMENT BY SECRETARY OF THE INTERIOR

STEWART L. UDALL

SECRETARY UDALL: I want you to know that I am not running out this morning because I am not interested in this presentation that is going to be made. I am very deeply interested. In fact, I am going to have them give me the presentations subsequently, but there is a Cabinet meeting beginning at 10 and I have to be over there in advance.

I want to express my own satisfaction that this meeting is held today, that we have resolved these things that were keeping us apart and we are here and ready to go ahead.

Also, I particularly wanted this morning to pay a personal tribute to the former Chairman, our good friend, Walter Hallanan. I wish Walter were here today because I would like him to personally hear the tribute I want to pay to him. I think this Department paid him its highest tribute some years ago, in 1952, when he received the Conservation Award of the Department, which is the highest award that we

have. We all know, all of you who have participated in the work of the Council know of his devotion to duty and of the way that he, as a man, bore responsibility. And I want to express my personal wishes that he continue to enjoy good health and happiness and I want to thank him profoundly for the service he has rendered to the Council and to the country.

It does seem to me, again, that our meeting here today represents the best tradition of government-industry cooperation in a very vital field, and I hope that we can really move ahead now in this very serious work that we have.

I think the last year has been a period in which we have made some very significant progress, in cooperation, in areas that all of you are interested in.

Last March, as you know, the largest lease sale in history was held: the lands on the continental shelf off the coasts of Louisiana and Texas. This action cleared the way for opening major new oil provinces. I don't know whether you all realize it, but to date there have been 11 major discoveries on lands covered by the sale last March. Only last week we announced another significant lease sale covering nearly a million acres, 800,000, off the coast of California. That is an oil-short area, the West Coast, and we hope this and other action that we hope to take later will have great significance on the West Coast.

We have also been very pleased, and many of the companies you represent here are participating in this program with our helium conservation program. Congress has given us the money needed to get the program under way. It has been aggressively launched. I think here again we have a very fine pattern of cooperation and I should like to express my pleasure at the relationships that we have had with those companies that are participating.

I don't know that one could point to any better examples of cooperation by a very vital industry and by the Government, and we all are working together for the common good and to strengthen our country.

As you probably know, Secretary Carr, Joseph Zwerdling, of the Federal Power Commission, and a group of us were in the Soviet Union just a month ago. We did not go there primarily to look at petroleum problems, and I don't pretend to be any expert in that field. But we were looking at energy problems and we found that we have a serious competitor in this field, and we found also when we were out in Siberia this tremendous, vast continent they have. In parts of Siberia where in the past it was thought there would not be petroleum reserves, they are making very significant discoveries. And I think it very important that we keep fully abreast of these developments and that we know exactly what we are confronted with.

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And I want to congratulate John Kelly and his people today for the fine work that has been done which you will see shortly. But if I could reiterate once again, it is the attitude of this Administration that we want the strongest possible petroleum industry in this country, we think we have it at the present time, we want it to continue to be healthy, we want to continue to have a very healthy relationship between the Government and the industry, we want to work closely together on all of these problems, where we can assist you, where we can jointly attempt to understand the problems we are confronted with, and to deal with them in terms of policy.

So I am delighted to be with you today, delighted the meeting is going forward, and good luck to all of you.

(Applause)

ACTING CHAIRMAN R. G. FOLLIS: Gentlemen, we have with us the Secretary of the Navy, Mr. Fred Korth.

Secretary Korth, I believe this is your first visit to the Council, and I might take just a moment to tell you that this Council consists of representatives of the industry from corporations, large and small, from trade associations, and constituted as a group to make themselves available to bring the views and the wisdom of the petroleum industry to the Government.

These gentlemen here have come from the several corners of the country and assemble periodically to render this

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service.

We are most happy to have you with us today.

(Applause)

STATEMENT BY FRED KORTH, SECRETARY OF THE NAVY

SECRETARY KORTH: Thank you very much. I appreciate very much your giving me the brief background on the National Petroleum Council. I was, however, aware of the composition and the very high type of membership of which this Council consists. I know many of the members, have known many over the years. I see and have visited with a number of my friends who come from one of the corners of the country, Texas, with which I am, of course, intimately familiar.

I want to express to all of you the appreciation which the Navy has for the tremendous work which the Council has done over the years. We in the Navy are one of the larger consumers of petroleum and petroleum products. We therefore are quite anxious, as am I, individually, to see that the petroleum industry remains a vital, strong and progressive industry which it has been, certainly, over the years. I want to again express my appreciation to you for the opportunity of visiting with you here.

Unfortunately, while I do not have a Cabinet meeting to attend, I have a meeting to attend where my immediate boss, Bob McNamara, commands my presence, and I think, I know I would have a much finer and certainly enjoyable time right



here with you. I have a duty to perform also. Thank you very much, gentlemen, for the opportunity of being with you.

(Applause)

ACTING CHAIRMAN R. G. FOLLIS: Yes, we can proceed now with the formal agenda and the roll-call. It is a long period since our last meeting, and we have acquired quite a number of new members. I would appreciate, when a new member's name is called, the Secretary will stop and the member will rise so that we can recognize him.

Mr. Brown?

MR. J.V. BROWN: As I call the names on the roll, if there is someone present who has come to sit in the place of a member who could not be here, will that person please rise and give his name so that the reporter may get it in the record.

#### ROLL CALL

MR. J.V. BROWN: Mr. Aitken.

MR. AITKEN: Present.

MR. J.V. BROWN: Mr. Anderson.

(No response)

MR. J.V. BROWN: Mr. Baldrige.

MR. BALDRIDGE: Present.

MR. J.V. BROWN: Mr. Ball.

(No response)

MR. J.V. BROWN: Mr. Banks.

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MR. BANKS: Present.

MR. J.V. BROWN: Mr. Bass.

(No response)

MR. J.V. BROWN: Mr. Benedum.

MR. BENEDUM: Present.

MR. J.V. BROWN: Mr. Bergfors.

MR. BERGFORS: Present.

MR. J.V. BROWN: Mr. Blaustein.

MR. BLAUSTEIN: Present.

MR. J.V. BROWN: Mr. Brazell.

MR. BRAZELL: Present.

MR. J.V. BROWN: Mr. Bridwell.

MR. BRIDWELL: Here.

MR. J.V. BROWN: Mr. Brockett?

MR. BROCKETT: Present.

MR. J.V. BROWN: Mr. Bruce Brown.

MR. B. BROWN: Present.

MR. J.V. BROWN: Mr. Buck.

MR. BUCK: Present.

MR. J.V. BROWN: Mr. Burlingame?

MR. BURLINGAME: Present.

ACTING CHAIRMAN R.G. FOLLIS: Mr. Burlingame, will  
you rise?

Mr. Burlingame is Executive Vice President of the  
Natural Gas Pipe Line Company of America.

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We would like to welcome you, Mr. Burlingame.

MR. BURLINGAME: Thank you.

MR. J.V. BROWN: Mr. Calkins.

(No response)

MR. J.V. BROWN: Mr. Carpenter.

(No response)

MR. J. V. BROWN: Mr. Clements.

(No response)

MR. J.V. BROWN: Mr. Comerford.

MR. COMERFORD: Here.

MR. J.V. BROWN: Mr. Copeland.

(No response)

*(late)*

MR. J.V. BROWN: Mr. Cowden.

(No response)

MR. J.V. BROWN: Mr. Crossett.

MR. CROSSETT: Here.

ACTING CHAIRMAN R.G. FOLLIS: Mr. Crossett, would you  
rise?

Mr. Crossett is President of the National Tank Truck  
Carriers, Incorporated.

Welcome, Mr. Crossett.

MR. CROSSETT: Thank you.

MR. J.V. BROWN: Mr. Davis.

MR. DAVIS: Here.

ACTING CHAIRMAN R.G. FOLLIS: Mr. Decker, will you

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rise, please?

Mr. Decker is President of the Independent Petroleum Association of America.

Welcome.

MR. J.V. BROWN: Mr. Donnell.

MR. DONNELL: Present.

MR. BROWN: Mr. Downing.

MR. DOWNING: Present.

MR. BROWN: Mr. Dunnigan.

MR. BATSEL: Elmer Batsell for Mr. Dunnigan.

MR. BROWN: Thank you, Mr. Batsell.

Mr. Endacott.

MR. ENDACOTT: Here.

MR. BROWN: Mr. Fountain.

MR. FOUNTAIN: Here.

MR. BROWN: Mr. Fox.

(No response)

MR. BROWN: Mr. Getty.

MR. GETTY: Here.

ACTING CHAIRMAN FOLLIS: Mr. Getty, will you rise?

Mr. Getty is President of the Tidewater Oil Company.

Welcome, Mr. Getty.

MR. BROWN: Mr. Goggin.

(No response)

MR. BROWN: Mr. Graves.

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(No response)

MR. BROWN: Mr. Green.

MR. GREEN: Here.

MR. BROWN: Mr. Hallinan.

(No response)

MR. BROWN: Mr. Hamon.

MR. HAMON: Here.

MR. BROWN: Mr. Hardey.

(No response)

MR. BROWN: Mr. Harper.

MR. HARPER: Here.

MR. BROWN: Mr. Howell.

MR. HOWELL: Here.

MR. BROWN: Mr. Jackson.

MR. JACKSON: Here.

MR. BROWN: Mr. Jacobsen.

MR. JACOBSEN: Here.

MR. BROWN: Mr. Charles Jones.

MR. JONES: Here.

MR. BROWN: Mr. J. Paul Jones.

MR. JONES: Here.

MR. BROWN: Mr. Kayser.

MR. BOYD: Howard Boyd for Mr. Kayser.

MR. BROWN: Thank you, Mr. Boyd.

Mr. Keeler.

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MR. KEELER: Here.

MR. BROWN: Mr. Kincannon.

ACTING CHAIRMAN FOLLIS: Mr. Kincannon, will you rise?

Mr. Kincannon is President of the National Petroleum Refiners Association.

Welcome to the group.

MR. KINCANNON: Thank you.

MR. BROWN: D. C. Connelly.

MR. CONNELLY: Here.

MR. BROWN: J. R. G. Follis

MR. FOLLIS: Present.

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MR. BROWN: Mr. Kindle?

ACTING CHAIRMAN FOLLIS: Mr. Kindle, will you rise?

MR. BROWN: He is apparently not here.

Mr. Kreutzer?

Mr. Locke?

Mr. Long?

MR. PIPKIN: J. H. Pipkin, for Mr. Long.

MR. BROWN: Thank you, Mr. Pipkin.

Mr. Ludwig?

MR. LUDWIG: Here.

MR. BROWN: Mr. McClure.

Mr. McCollum.

MR. MC COLLUM: Here.

MR. BROWN: Mr. McGee.

Mr. McWilliams.

MR. MC WILLIAMS: Here.

ACTING CHAIRMAN FOLLIS: Will you rise?

Mr. McWilliams is President of the Petroleum  
Equipment Suppliers Association.

Welcome.

MR. MC WILLIAMS: Thank you.

MR. BROWN: Mr. Maguire?

MR. MAGUIRE: Here.

MR. BROWN: Mr. Majewski?

MR. MAJEWSKI: Here.

MR. BROWN: Mr. Marshall?

MR. MARSHALL: Here.

MR. BROWN: Mr. Miller? *no response*

Mr. Milligan?

MR. MILLIGAN: Here.

MR. BROWN: Mr. Mitchell?

ACTING CHAIRMAN FOLLIS: Mr. Mitchell, will you  
rise?

MR. BROWN: He is apparently not here.

Mr. Murphy?

MR. B. BROWN: Bruce Brown representing Mr. Murphy.

MR. BROWN: Thank you, Mr. Brown.

Mr. Nickerson.

MR. NICKERSON: Here.

MR. BROWN: Mr. Nielson? *no response*

Mr. Niness? *(late)*

Mr. O'Shaughnessy? *no response*

Mr. Parkes? *no response*

Mr. Parten?

MR. PARTEN: Here.

MR. BROWN: Mr. Porter?

MR. PORTER: Here.

MR. BROWN: Mr. Potter?

MR. POTTER: Here.

MR. BROWN: Mr. Rathbone?



MR. PIERSON: George Piercy for Mr. Rathbone.

MR. BROWN: Thank you, Mr. Piercy.

Mr. Rather?

MR. RATHER: Here.

MR. BROWN: Mr. Ritchie?

MR. RITCHIE: Here.

MR. BROWN: Mr. Robineau?

MR. ROBINEAU: Here.

MR. BROWN: Mr. Rodman? *no response*

Mr. Rowan?

MR. ROWAN: Here.

MR. BROWN: Mr. Rubel? *no response*

Mr. Scott?

ACTING CHAIRMAN FOLLIS: Mr. Scott is a member of the Executive Committee of the New England Fuel Institute.

Welcome to our group.

MR. SCOTT: Thank you.

MR. BROWN: Mr. Seydell?

ACTING CHAIRMAN FOLLIS: Mr. Seydell is President of the National Stripper Well Association.

Glad to have you here.

MR. SEYDELL: Thank you.

MR. BROWN: Mr. Smith? *no response*

Mr. Smoker? *no response*

Mr. Spaght?

MR. SPACHT: Here.

MR. BROWN: Mr. Spahr?

MR. FOSTER: Clyde Foster appearing for Mr. Spahr.

MR. BROWN: Thank you, Mr. Foster.

Mr. Supplee?

MR. WEBB: W. Webb for Mr. Supplee.

MR. BROWN: Thank you, Mr. Webb.

Mr. Swearingen?

MR. NELSON: Richard Nelson representing Mr. Swearingen.

MR. BROWN: Thank you, Mr. Nelson.

Mr. Vandever?

MR. VANDEVEER: Here.

MR. BROWN: Mr. Vockel?

MR. VOCKEL: Here.

MR. BROWN: Mr. Wagner?

ACTING CHAIRMAN FOLLIS: Mr. Wagner, will you stand?

Mr. Wagner is Director of the Petroleum Division,  
Farmers Union Central Exchange, Inc.

Welcome.

MR. WAGNER: Thank you.

MR. BROWN: I want to apologize, I overlooked Mr.  
Steiniger.

MR. STEINIGER: Here.

ACTING CHAIRMAN FOLLIS: Will you rise?

President of Sinclair Oil Corporation, welcome.

MR. STEINIGER: Thank you.

MR. BROWN: Mr. Warren?

MR. WARREN: Here.

MR. BROWN: Mr. Wells?

MR. WELLS: Here.

MR. BROWN: Mr. Whaley?

MR. WHALEY: Here.

MR. BROWN: Mr. White?

Mr. Whiteman?

MR. WHITEMAN: Joseph Whiteman representing Mr.

S. D. Whiteman.

MR. BROWN: Thank you, Mr. Whiteman.

Mr. Windfohr?

MR. WINDFOHR: Here.

MR. BROWN: Mr. Winger?

ACTING CHAIRMAN FOLLIS: Mr. Winger, will you rise?

MR. WINGER: Yes, sir.

ACTING CHAIRMAN FOLLIS: Mr. Winger is Vice

President of the Chase Manhattan Bank.

Welcome.

MR. WINGER: Thank you.

MR. BROWN: Mr. Young?

Mr. Chairman, we have a quorum.

ACTING CHAIRMAN FOLLIS: Gentlemen, we have a quorum.

The meeting has come to order.

(Council members who entered after the meeting began:)

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✓ Samuel F. Niness, of Chemical-Leaman Tank Lines,  
Inc., Downingtown, Pennsylvania.

✓ George R. Copeland, of Algonquin Gas Transmission,  
Boston, Massachusetts.

✓ W. W. Vandever, Chairman of the Board, Vanson Pro-  
duction Corporation.

The minutes of the last meeting have been distributed -- I am having a little microphone trouble, gentlemen. The minutes of the last meeting have been distributed. If there are no questions, a motion to approve would be in order.

FROM THE FLOOR: So move.

FROM THE FLOOR: Second.

ACTING CHAIRMAN FOLLIS: So moved and seconded.

All those voting favorably say Aye.

(Approved)

ACTING CHAIRMAN FOLLIS: Now, gentlemen, since the last meeting of the Council we have lost two members and friends and I would like to ask the first one, to Alton, whom all of us have known as a friend and admired, as Pete Jones. Mr. Charles Jones, I believe, has a memorial that he would like to present for the record.

In voting on this memorial I would suggest that we have a standing vote.

MR. JONES: Mr. Chairman, Whereas the members of the National Petroleum Council in regular meeting duly assembled in Washington, D. C., this fourth day of October, 1962, have noted with a deep sense of shock and with profound sorrow the death of its singularly faithful and devoted member, W. Alton Jones of New York City, and

Whereas, W. Alton "Pete" Jones was one of the founders

of the National Petroleum Council, continuing as a member and always with distinction on numerous council committees and as a member of the Agenda Committee since the Council's beginning; and

Whereas, his steadfast devotion and interest in the National Petroleum Council directly contributed to the Council's achievement in becoming an outstanding symbol of government - industry cooperation, thereby contributing to the welfare and security of the United States of America; and

Whereas, the life of W. Alton Jones shines forth for all men to see as embodying and epitomizing not only that pioneering spirit that made this nation great, but that spirit of devotion, ability and loyalty to his family, his business and his country, which won for him the admiration of all who knew him and made him one of the most outstanding and distinguished personalities of this generation. He was truly a great American and one of the keystones of the vast American Oil and Gas Industries.

Now therefore, be it resolved, that this Resolution commemorate and record the National Petroleum Council's sincere sympathy and deep sense of loss upon the death of W. Alton Jones, a man of integrity and ability, but even more, a close and beloved friend, and it is directed that an appropriately reproduced copy of this resolution in

in memoriam be presented to Mr. Jones' family as a token of the highest esteem and regard of his colleagues on the Council and their appreciation for his services.

I offer the Resolution, Mr. Chairman.

ACTING CHAIRMAN FOLLIS: Gentlemen, all those in favor of the Resolution, please rise.

(All rise)

ACTING CHAIRMAN FOLLIS: The second member of our group who passed on during this period was Reese Taylor, and Mr. Ed Brockett is ready to present a Resolution in memory of Mr. Taylor.

Mr. Brockett.

MR. BROCKETT: Mr. Chairman, Mr. Secretary, this Resolution in memorial of Reese H. Taylor:

The National Petroleum Council recalls with profound sorrow the death of Reese Hale Taylor on June 22, 1962.

He was a member of this Council from the time of its organization to the date of his death, a period of sixteen years, having been selected by each of the Secretaries of the Interior during that period to serve on the Council as a representative of the oil and gas industry in this cooperative effort between the petroleum industry and the Federal Government.

The members of the National Petroleum Council

recognize with deep appreciation the outstanding contributions made by Reese Taylor through his work on the Council and his equally significant contributions to the war effort as a member of the Petroleum Industry War Council. He served on numerous Council committees and had a record of long service as an elected member of the Appointments Committee.

He always gave freely of his time, effort, vision and foresight, working diligently to promote the success of the Council.

Although Mr. Taylor's business activities were primarily on the West Coast, his ability, knowledge, and experience in both the petroleum and steel industries were recognized throughout the nation. His accomplishments brought him many honors and responsibilities as an officer and member of many associations, clubs, and companies, to each of which he gave his boundless energy and keen intellect to the solution of the problems involving the welfare of his country, state, community, and toward the development of cultural, educational, and charitable institutions.

Reese Taylor was a strong advocate of maintaining in this nation a highly competitive free enterprise system and he arranged for the publication of a series of advertisements informing the public how that system in practice works in American business. In addition to being



recognized as an outstanding statesman in the petroleum industry, and as a generous and vigorous leader in civic affairs, he was an ardent supporter of sports, ranging from thoroughbred racing, which he served as President of the Los Angeles Turf Club, to tennis, which he served as President of the Youth Tennis Foundation of Southern California. In addition, he played a vital part in bringing big league baseball to his home city of Los Angeles.

Reese Taylor possessed the wonderful and human quality of being devoted to his family and to his loyal and admiring friends. He had an infinite capacity for devoting his thoughts and energy to his family and friends without any limits of demand upon his time.

Reese Taylor was a big man in every way, physically and mentally, but the real measure of his stature was most clearly revealed in his leadership of his company, The Union Oil Company of California.

To the petroleum industry, to the world of civic development, to his devoted family and host of loyal and admiring friends, his passing represents an immeasurable loss.

Accordingly, it is resolved on this fourth day of October, 1962, at the National Petroleum Council's meeting in Washington, D. C. that the Council express its genuine appreciation for his valuable contributions,

record its profound sense of loss at his passing, and extend its sincere sympathy to his family and associates.

It is further resolved that this resolution be entered upon the permanent records of the Council and that an appropriate copy thereof be delivered to his family, such to be signed in behalf of the membership by the Chairman and the Secretary-Treasurer of the Council.

Mr. Chairman, I offer this resolution,

ACTING CHAIRMAN FOLLIS: Gentlemen, you have heard the resolution.

(All rise)

ACTING CHAIRMAN FOLLIS: I know you all join me in a sense of satisfaction and pleasure that this Council is back in action after this ten months moratorium. I might say it hasn't been quite a moratorium, because during the ten months, whereas there have been no committee meetings, no Council meetings and no committee meetings, the work of the staff has gone on with great energy. And later when we get the committee reports and get a look at such reports as, for example, the report on Russian oil, which is 760 pages long I am told, you will agree with me that the zeal and desire of the group to carry on has kept them going even during this period of ten months of cessation of meetings.

The one regret I think we can all join in is the

fact that Walter Hallanan, in August, was obliged to call me and tell me that he could no longer carry on as Chairman of the Council due to his health, and asked me to fill in for the balance of the term until a new slate of officers could be elected and to hold a meeting as soon as the affairs of the Council could be straightened out.

I had a telephone conversation with Walter yesterday, I might say, and beside expressing deep regret that he could not be here, he also told me that he feels he has now turned the corner and he is on the mend. So I am sure you are all happy to hear that.

It seems to me that the Council in its seventeen years has had a strong leader and a wise Chairman in Walter and that it would be appropriate that we take some recognition of that, more than just in passing, as I am doing now. And for that reason I have asked -- I would like to ask Mr. Majewski, Mr. Alfred Jacobsen and Mr. Porter if they would join with me in preparing a memento in the form of a Resolution that we might have ready for consideration of the Council at the next meeting.

Would you gentlemen do that?

I have already mentioned to you gentlemen the very find cooperation and assistance that we have had all through in connection with the clarification of the issues that bothered us in the President's Proclamation of last

February. And I might say that the person who was on the job all the time, whether due to Walter's illness or otherwise, was Mr. Kelly, Secretary Kelly.

In a moment I would like to ask Secretary Kelly, our Co-Chairman, to speak to us. Before I do that, though, it seems to me that it would be very appropriate to open this meeting with a statement which Secretary Kelly handed me this morning from the President of the United States and I would like to read it.

This is from the President:

"I am very happy to greet the members of the National Petroleum Council and in so doing, to acknowledge the work of the Council which has continued so successfully during the administration of four Presidents of the United States. It was in May 1946 that President Truman, realizing the need for continuing during times of peace, the close and harmonious relations that had existed between Government and the petroleum industry during World War II, authorized the establishment of the Council. International developments since that time have made the Council a valuable instrument.

"The development and security of this Nation depend on the preparation of forward-looking programs related to petroleum as one of the most important forms of energy. The validity of these programs is dependent on

continuing ready access by Government to complete and accurate information on developments in your industry.

"The membership of your Council makes a most important contribution to the Department of the Interior in the discharge of its broad responsibilities in the fields of petroleum and gas. I am pleased that cooperation between Government and the oil industry, as typified through the functioning of this Council, continues to be so effective."

Gentlemen, I would like to call on our Co-Chairman for comments that he cares to make.

SECRETARY KELLY: Thank you, Mr. Follis.

I don't know if I have very much to say. Both my bosses evidently have given all the encouragement I think and expressions of appreciation for the work of the Council, the past work that the Council has done and hope that the Council may continue effectively.

I, however, am very pleased to note that the problems I would say somewhat clouded the status of the Council in the past ten months have been resolved and I believe to all our mutual satisfaction and that now the Council's activity can go ahead without interruption.

We all know that the Council provides an important link between Government and industry. We feel that especially in national defense planning the complexity and

magnitude of the problems with which this nation is now confronted makes it imperative that the full competence of the petroleum industry be effectively utilized.

Therefore I hope for and ask your continued support and assistance in planning for national defense. The experience we have gained over the years in Government-industry cooperation in the petroleum defense planning points the direction I believe that we should follow in the future. However, we should attain a greater degree of understanding and mutual beneficial exchange between Government and industry than I believe now exists.

I believe we all consider ourselves as citizens first and members of the industry and as officials of Government second. I myself am confident that from my close working relationship with you for the past year and a half as a Government employee and for over 25 years as a working member of the petroleum industry that we can continue to expand our contacts and enhance our effectiveness.

In this connection, Mr. Chairman, the National Petroleum Council serves as the bridge between industry and the Government.

As we know, there is serious work to be done in the future and the accomplishments of the immediate past, especially this fine report we are going to hear this morning, gives us every assurance that the Council will

fully meet the demands that are placed upon it and will continue to make a further contribution to the advancement of the interest of all of us here in these United States.

Thank you, Mr. Chairman.

(Applause)

ACTING CHAIRMAN FOLLIS: Gentlemen, when Mr. Hallanan asked me to take over for him and we had succeeded in getting the uncertainties of the new Presidential proclamations cleared up, I appointed a special committee on organization with the thought that they might consider the various effects on our organization of these new proclamations, that they might also act as a nominating committee and nominate a new slate of elective officers and committees for the fiscal year.

Mr. Jake Hamon has acted as chairman of that nominating committee, organization committee, and I would like to ask him for his report.

MR. HAMON: Mr. Chairman, Mr. Under Secretary, and members of the Council:

Your committee consists of Bruce K. Brown, Donald L. Connelly, J. Howard Marshall, L. F. McCollum, M. J. Rathbone, C. Pratt Rather, M. H. Robineau, Roland V. Rodman, John E. Swearingen, and J. Ed Warren.

Before getting into some of the serious matters of the committee I might tell you gentlemen that one of the

questions that was -- or suggestions that was given to us was that we attempt to liven up the Council meeting.

So I appointed a subcommittee, Mr. Donald Connelly, Mr. Larry O'Connor and Mr. Jerome O'Brien, absent-mindedly not realizing they were all Irishmen. I should have but I didn't. And I asked them to give me some suggestions of how we could make the Council meeting more interesting.

Unfortunately, as many well-intentioned efforts must come to a bad end, the Committee Report was not very satisfactory.

Being Irishmen they first thought of importing the leprechauns -- those are those little men apparently that run around in Ireland.

(Laughter)

MR. HAMON: They thought it would be a fine idea for them to unzip our zippers and one thing and another. But I told them that at our age that was a constant problem anyway.

(Laughter)

MR. HAMON: So that wasn't necessary.

Then they thought it would be a fine idea to liven up the meeting if we all came in dressed in green suits.

(Laughter)

MR. HAMON: However, I told them that it would look like every Council meeting was St. Patrick's Day. So



I had to veto that.

Finally, Mr. Larry O'Connor, representing one division of the committee, came up with the idea that we would have the waitresses from the Key Club pass out the various papers. (Laughter)

Now, this didn't seem to be a very bad idea -- (Laughter) -- but I found the girls couldn't pass the Civil Service examination. (Laughter)

So I thought that I might report that your committee made a sincere effort to lighten up the meeting but we made a mistake putting three Irishmen on the committee. (Laughter)

In all seriousness, gentlemen, we did try to study the problems within the limitations that we had before us.

We do recommend, Mr. Chairman, that a committee be appointed to review the bylaws of the National Petroleum Council to see that they conform with Executive Order 10007.

I believe that is right, Mr. Kelly.

And also with the Attorney General's recent ruling on the National Petroleum Council.

Two. And this is not in reflection of the devoted and untiring and loving effort that our former Chairman, Walter Hallanan gave to the Committee for 17 years, we recommend that in the future the National Petroleum Council follow general industry practice in its organizations and

by tacit understanding, because after all that is all our recommendation could be, since the Council is reconstituted from year to year, and the elections have to be held every year. But we do recommend that there be a general understanding that the time limit of the officers' terms should be for two years, save in cases of exceptional emergency, such as the Korean conflict.

We felt that that was necessary because in the first place it provided some change of viewpoint, and in the second place we did not feel that it was fair to ask a busy man to take time out from his business for more than two years. And those are our two recommendations.

I come now to the nominations. I will read the entire list of nominations, which is the chairman, the vice chairman and members of the Agenda Committee and members of the Appointment Committee, and then I will move their election.

I nominate Mr. R. G. Follis as Chairman. All of you know Mr. Follis. He has been Vice Chairman for some 12 or 14 years. I know he will make a great Chairman, and our Committee was unanimous in his selection.

As Vice Chairman we nominate Mr. Orville Carpenter.

As Chairman of the Agenda Committee, we nominate Mr. Jacobsen. I might say that Mr. Jacobsen has served a long time and expressed a desire to be relieved from his

duties, but in view of the fact that we had a change in the administration and in view of Mr. Jacobsen's fine service, your committee finally prevailed upon him to retain the chairmanship for the time being, at least.

The other members of the Agenda Committee are Paul Endacott, myself, John Swearingen, J. Ed Warren, L. F. McCollum, B. L. Majewski, J. Howard Marshall, J. R. Parton, Bruce Brown and M. J. Rathbone,

On the Appointment Committee, as chairman we have Mr. Frank M. Porter. Mr. Porter likewise was perfectly willing and anxious to be relieved, but for the same reasons we prevailed upon him to stay on.

The other members of the Appointment Committee are J. S. Bridwell, J. C. Donnell, Augustus C. Long, C. Pratt Rather, M. H. Robineau, Roland V. Rodman, George F. Getty, Henderson Supplee, Harold Decker, Robert F. Windfohr.

Mr. Chairman, I move the nomination of the Chairman, the Vice Chairman and the members of these two committees.

*Hamon E.*  
ACTING CHAIRMAN FOLLIS: Mr. Hamon, I am a little bit thrown off my schedule here. I wonder if I could ask Mr. Spaght to act as chairman to dispose of this matter.

MR. HAMON: Mr. Temporary Chairman, I move the nomination of the Chairman and the Vice Chairman and the members of the Agenda and Appointment Committees.

TEMPORARY CHAIRMAN SPAGHT: Mr. Hamon, you move

the election of this slate?

MR. HAMON: I move the election. I gum things up.

MR. MAJEWSKI: Mr. Chairman, I would like to second that motion and move that the nominations be closed and one unanimous ballot be cast, for the election of these gentlemen.

TEMPORARY CHAIRMAN SPAGHT: All those in favor will please say Aye.

(Chorus of Aye)

TEMPORARY CHAIRMAN SPAGHT: Thank you very much, gentlemen.

CHAIRMAN FOLLIS: Gentlemen, I must say that I feel highly honored by your action. I think that in the seventeen years that I have been a member of this Council I have felt that it really has made a great contribution to the country. I think the guidance and the counsel of Mr. Hallanan has had an enormous influence, and probably more important than that, certainly more important I think than any new chairman I think could have, is the great interest and the great willingness of the members of the Council to accept chairmanship of committees and do the serious work, and really the massive work as is done on many occasions in the interest of the work of the Council.

Gentlemen, if, as I know I can, I can count on you to cooperate as you have in the past in accepting these assignments, in doing these jobs the way you have

done them, I certainly will be very, very happy, and I would feel that anything I could contribute has been more than worthwhile.

So thank you.

Now we have the report of the Agenda Committee, Mr. Jacobsen.

MR. JACOBSEN: The Agenda Committee Report is as follows:

Pursuant to the call of a meeting of the Agenda Committee of the National Petroleum Council made by the Committee's Chairman, Mr. A. Jacobsen, in his wire to the members on September 24, 1962, and with the approval of the meeting and its agenda having been obtained from the Honorable John M. Kelly, Assistant Secretary of the Interior, and Government Co-Chairman of the Committee, the Agenda Committee met on October 3, 1962, at 3:00 p.m. in the office of the National Petroleum Council in Washington, D.C.

Under date of September 26, 1962, the Hon. John M. Kelly addressed a letter (copy of which is attached hereto) to Mr. R. G. Follis, Acting Chairman of the National Petroleum Council requesting the Council to make a thorough study on the current annual requirements for oil country tubular goods, including gas industry needs, and of other important steel products. It was also requested that the study include comment on the possible extent of

substitution of plastic pipe under emergency conditions.

As provided in the Articles of Organization of the Council, this letter was considered at the above mentioned meeting of the Agenda Committee, at which meeting it was unanimously agreed to recommend to the Council the appointment of a committee to make the study as requested by Secretary Kelly and to report to the Council. The committee undertaking the study should not suggest plans or programs but should confine reports to findings of fact.

Under date of October 3, 1962, the Hon. John M. Kelly addressed a letter (copy of which is attached hereto) to Mr. R. G. Follis, Acting Chairman of the Council, requesting the Council to make a thorough study of domestic manpower requirements as of July 1, 1962, throughout the petroleum and gas industries.

As provided in the Articles of Organization of the Council, this letter was considered at the above mentioned meeting of the Agenda Committee, at which meeting it was unanimously agreed to recommend to the Council the appointment of a committee to make the study as requested by Secretary Kelly and to report to the Council. The committee undertaking the study should not suggest plans or programs but should confine reports to findings of fact.

I move the adoption of this report.

MR. MAJEWSKI: Second the motion.

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CHAIRMAN FOLLIS: Gentlemen, the report of the Agenda Committee has been moved and seconded. All those in favor please say Aye. Opposed.

It is so ordered.

Thank you, Mr. Jacobsen.

Now we will have the report of the Committee on Petrochemicals, Mr. Bruce Brown.

MR. B. BROWN: Gentlemen, this is called an interim report, but I think it is pretty much a final report, as far as the Council is concerned. Instead of reading the report to you I will try to summarize the highlights of it.

The question was asked generally about the petrochemical manufacture by oil and gas companies coming within the jurisdiction of the Department of Interior. The first problem was to find out what a chemical was, because the chemical books will probably list a million of them and we couldn't very well issue a questionnaire with a million specific points to be answered.

So a technical subcommittee, headed very ably by Tom Cabbage of Phillips, met in Washington in the offices of the Council. There were technical petrochemical experts from about 15 oil and gas companies. We debated -- I joined with them -- we debated as to what chemicals were worth finding out. We got a list of 86 chemicals that seemed to be significant. We also had help from the staff of the Depart-

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ment of Commerce in selecting the chemicals which we would investigate. They are going to endeavor to run a similar questionnaire through their offices to the chemical companies that come under the jurisdiction of the Department of Commerce.

Our report is only a partial report. The gist of it is this: There were 86 important chemicals that we believe are manufactured by oil and gas companies. We sent out a questionnaire to 481 companies; 285 were refineries, 183 were natural gas plants. 73% of the questionnaires were answered. Many of the questionnaires merely said "No, we don't make any of these things."

The Committee staff has reported from published literature that there are 465 plants in the U.S. that make petrochemicals, of which 165 are owned or operated by oil and gas companies. They estimated that practically -- we got a 92% coverage in answers on the questions. Some chemicals are manufactured only by one company, some by two, some by three, some generally. The ten leading petrochemicals at the present time manufactured by oil and gas companies, if you can call hydrogen a chemical, were sulfur, benzene, toluene, zylenes, hydrogen, hexanes, propylene, butylenes, heptanes and butadiene.

Thank you.

CHAIRMAN FOLLIS: Mr. Brown, are you ready to ask for approval of this report?



MR. B. BROWN: Yes, sir. I move approval of the report of the Committee.

MR. HAMON: Second.

CHAIRMAN FOLLIS: Moved and seconded.

Questions?

All those in favor please say aye. Opposed?

It is so ordered.

Now we have the Committee on Petroleum Storage Capacity, Mr. R. L. Milligan.

MR. MILLIGAN: Mr. Chairman, Mr. Secretary, and members; the Committee on Petroleum Storage Capacity was appointed February 15, 1962. Shortly thereafter the Council's Committee activities were virtually suspended. Except for appointment of members of this committee no activities were undertaken until August 16, when Acting Chairman Follis requested that the work of the committee be resumed.

In previous similar studies undertaken by comparable Council committees it has been found desirable to appoint a technical subcommittee to undertake the preparation of requisite questionnaires and to draft a recommended report for the Committee. This subcommittee has been completed. As soon as this subcommittee membership is cleared by the representatives of the Government its first meeting will be called and a request to the industry for the required information will be sent out shortly thereafter.

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Do you wish a motion?

CHAIRMAN FOLLIS: Thank you, Mr. Milligan.

Are there any questions?

(No response)

CHAIRMAN FOLLIS: Thank you.

Now we have the Committee on Oil and Gas Transportation Facilities, Mr. Spaght.

MR. SPAGHT: Mr. Chairman, Mr. Secretary, gentlemen; I am pleased to submit the final report of the Committee on Oil and Gas Transportation Facilities of M.P.C. This report was prepared in response to a request made in December of 1960 by the Honorable Fred Seaton, then Secretary of the Interior.

With your permission, Mr. Chairman, I would like to give you a brief summary of the report of the committee, which you will find in the front of this document. "The study requested by the Department of the Interior was to cover the petroleum and natural gas transportation capacities as of January 1, 1961, including natural gas transmission lines, crude oil and petroleum product pipelines, inland waterways, barges, tank cars and tank trucks.

Incidentally, this is the first time that a Council report on transportation has included natural gas transmission lines.

In addition to the foregoing, the committee was asked by the Department of the Interior to prepare a master

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set of maps on the U.S. strategic map series, showing locations of all gas and petroleum pipelines, pump stations, river crossings, interconnections, et cetera. These maps are in such a scale that 87 sections are required to cover the U.S. Some 205 individual master maps have been prepared supported by about 950 system maps compiled by the participating companies.

All maps will be turned over to the Office of Oil and Gas, Department of the Interior, for its use in defense mobilization studies. Because of the highly detailed information shown on these maps they are not being published as a part of the report.

In the 1958 report of the N.P.C. transportation of l.p.g. was treated as a separate subject. Although such treatment was not required in the current study, information with regard to this type of product is available in this report through segregation of tank truck and tank car capacities by pressure specifications.

I think it will be evident from this brief introduction that this report is the most comprehensive study of oil and gas transportation facilities yet prepared under the auspices of N.P.C. The work of assembling the data necessary to provide the required information was accomplished by five subcommittees, and their memberships will be found in the documents.

Three of the subcommittees conducted direct surveys in order to obtain the required data. In these cases questionnaires were formulated by the subcommittees but sent out from and returned to the Office of the National Petroleum Council, thus preserving the confidential nature of individual data. The information obtained from these questionnaires was analyzed and processed by the Council's staff to obtain the consolidated data included in this report.

✓ By the use of card-punch techniques these data have been accumulated in a form suited to use by governmental agencies in defense planning.

It is the opinion of the committee that the information which is published in this report is of a nonconfidential nature. The reports of the individual subcommittees are included in the document. I will just give a very brief resume of each of the five subcommittee reports. As to tank trucks: This report gives the number, capacity, type and general location of all tank motor vehicles in the U.S. as of December 31, 1961.

Unlike N P C. tank truck reports, this study presents particulars as to design, lining, pressure and I.C.C. specifications of tank truck equipment, which information was gathered by direct survey from the operators of this equipment.

In this survey questionnaires were mailed to nearly

10,000 private and for-hire operators.

As to inland waterways: This report covers the propelled and nonpropelled tank barges in the U.S. suitable for transporting petroleum and petroleum products in bulk on the inland waterways, the Great Lakes, and in some instances coastwise.

The U.S. Coast Guard's list of inspected tank vessels was the primary source of information in this report.

As to tank cars -- one more thing, if I may, please, on inland waterways: The subcommittee is of the opinion that it would be a relatively simple matter for the U.S. Coast Guard to make an annual recapitulation of total barge-carrying capacity by geographical areas. Your committee feels that this suggestion warrants further exploration on the part of the Department of the Interior.

As to tank cars: The report covers the total number by types of tank cars available in the U.S. for the transportation of petroleum and petroleum products. Segregation of this equipment by capacity would have required a special survey, and the Department of the Interior agreed that this would not be necessary for its purposes.

The report was formulated primarily from information provided by the American Railway Cars Institute and the Association of American Railroads.

As to natural gas pipelines: This is the first time

the data on the major natural gas transmission facilities in the U.S. have been included in an N.P.C. report. The natural gas industry applied itself wholeheartedly to the task of gathering the detailed information required. 36 companies participated in the subcommittee's survey by providing highly detailed information and maps of their facilities. A map task force provided by five gas transmission companies prepared two master sets of maps, in the U.S. strategic map series, depicting the location of lines, compressor stations, et cetera.

The subcommittee has taken cognizance of the rapid expansion of facilities in the gas transmission industry. For this reason it points out that the detailed maps and facility data provided to the Department of Interior and contained in its report are subject to early obsolescence if not maintained on a current basis.

The subcommittee feels that this information should be updated annually. However, this is a matter for decision by the Department of the Interior.

Finally, as to petroleum lines: Information for this report was gathered by means of 222 questionnaires as well as from other available sources, data were obtained on almost 1800 pump stations and 1600 river crossings, et cetera.

The subcommittee has analyzed both crude and product pipeline facilities in each of the five P.A.D. districts in relation to crude production, refining capacity and normal

j9 inter-district movements. Included in the report are maps showing schematically capacities of crude oil pipeline connections between producing and refining areas and of product pipeline interconnections between refining and consuming areas. In addition to the foregoing, the subcommittee prepared a master set of maps on the strategic map series for the Department of the Interior.

We have one recommendation. In the case of both natural gas transmission lines and petroleum pipelines, a very considerable amount of detailed data will be supplied to the Department of the Interior. It is possible that some of the information may require further clarification and interpretation. It is recommended that the Subcommittee on Gas Pipeline Transportation and the Subcommittee on Petroleum Pipeline Transportation be kept in existence until March 31, 1963, with the understanding that their activities will be limited to producing such interpretation and clarification as the Department of the Interior may request.

I understand, Mr. Chairman, that this is not unusual to recommend such a continuation of subcommittees.

And finally, I would like to make a couple of acknowledgments. I say in all sincerity that this has been a very, very large undertaking by a great many people, and I would like to thank everyone who had a part in the tremendous job that was entailed in its preparation. And so in the com-

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mittee's words, the committee would like to express to the Chairman and members of the subcommittees its appreciation for the time and effort they have devoted to compiling the data reported herein and provided the Department of the Interior. The Committee appreciates the excellent cooperation of the many individual companies, who through response to the questionnaires, made the accumulation of this data possible.

In particular, the committee wishes to recognize the invaluable assistance of its Secretary, Vincent M. Brown, who also served as staff assistant on each of the subcommittees and directed the work of the Council's staff. Personally, I can not speak too highly in commending Vincent M. Brown's work in this regard.

This is the end of the report proper, Mr. Chairman. May I just add my own personal thanks to my committee assistant, Mr. Dean <sup>ne</sup> Hodges, for his efficient handling of so much of the Chairman's work.

I believe it is appropriate for me, sir, to move the adoption of the report, which I do.

CHAIRMAN FOLLIS: Is there a second?

MR. BUCK: Seconded.

CHAIRMAN FOLLIS: It has been moved and seconded, gentlemen. All those in favor please say aye. Opposed?

It is so ordered.

I might say, Mr. Spaght, that you have given me



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another illustration of the massive amount of work and effort that Council subcommittees are willing to do and put into these jobs. I think this is a fine example.

MR. SPAGHT: Thank you.

CHAIRMAN FOLLIS: Now, gentlemen, we have the Committee on the Impact of Oil Exports in the Soviet Bloc, Mr. Ed Warren.

MR. WARREN: Mr. Chairman, Mr. Secretary, and gentlemen of the Council, this Committee was appointed at the last Council meeting. We had our initial meeting of the Committee called by Co-Chairman, Mr. Jerry O'Brien, representing the Government, and myself, from New York, in early January. At that meeting of the Committee we considered what the scope of the study should be and the direction it should take.

In considering the scope it seemed almost necessary that we should develop information about the future potential of the exports from Russia as well as their present impact for what happens in the future was of great importance.

Secondly, we considered the ways and means for assembling the necessary data that was pertinent, for analyzing it, forming a judgment, and that brought up the matter of appointing a working committee. This committee really had a tremendous task presented to it. It had to evaluate all segments of the petroleum industry and the energy industries in

Soviet Russia, its sources of information largely had to be from Russia, and this volume which you will see, there is a bibliography of about fifty pages covering the research material that they went through in assembling the information that went into the final report.

I mentioned to our committee yesterday that it seemed important that the working committee have three qualifications; (1) they had to have a broad worldwide background in the technology and economics of the petroleum industry; (2) it was most desirable that they had had some background in what happened in Russia; and (3) the willingness to put in a tremendous amount of effort in this massive work that had to be made to build the report.

We were very fortunate that George Piercy undertook the Chairmanship of the working committee. Mr. Piercy was a member of the American delegation, industry delegation, that went to Russia in early 1960, spent 30 days there, and, of course, his industry background as both an economist and many facets of the oil industry, gives him an analytical and judgment facility that was very important.

Assisting Mr. Piercy was, of course, his working committee, and particularly the Government Co-Chairman, Mr. Robert Ebel. Mr. Ebel, who is a geologist, had background in oil, also speaks the Russian language and can translate the Russian literature and has followed the Russian oil prob-

len extensively.

I want to say that this report here is in two volumes, No. I and No. II. Volume II is a compilation of all the data <sup>type</sup> that was utilized in coming to the conclusion and the summary that is in Volume I.

I am, Mr. Chairman, going to move the adoption of this report and that Volume I be released at today's meeting, but Volume II be held for some three or four weeks for some revision which has to go into it and a final printing. But before a discussion I think that it would be well -- and our committee who heard it yesterday were all so impressed -- that we hear from Mr. George Piercy, who will review the report, and then I would like to move its adoption.

CHAIRMAN FOLLIS: Fine.

MR. PIERCY: Thank you, Mr. Warren.

I, in this presentation here, am going to give you only what we consider the comments and conclusions of the committee in the first half of Volume I. I will try to keep the source data and the background data to a bare minimum. Those of you who are interested in this can get it out of Volume II as soon as it is printed and circulated.

Before I present the comments and conclusions of the committee I believe it would be worthwhile to briefly outline how we went about this study, the plan of the study. To start with, of course, we studied the petroleum industry in the USSR

in considerable depth. This meant starting with an evaluation of the quality and the scope of their prospective sedimentary areas. We analyzed their exploratory effort, their development drilling, their reserves, their production methods, ~~re-~~<sup>refining</sup> redesigning, transportation facilities in detail because it is very, very pertinent to this problem; the costs, the amount of money they are pouring into their oil industry, the consumption, the trade patterns of this and, of course, projections into the future to the extent possible.

Also, to the extent possible, the petroleum industry in each of the other Bloc countries was analyzed in this same detail.

From the supply-demand relationships that we built up in each country and for the over-all Bloc, future exportable surplus of petroleum from the Bloc was determined. But petroleum, of course, is only one form of energy. So it was necessary to study in considerable depth the entire energy base of these countries to see if our petroleum projections were consistent with the supply and demand relationship for their entire energy picture.

Going on from this, we studied the past Bloc petroleum exports, the exports to the Free World, how it was absorbed in the Free World, its effect on the producing and importing countries, and its contribution as a foreign exchange earner of the Bloc.

But here again, since petroleum is only one, but a very vital part of the Soviet Bloc foreign trade, we didn't think it could be evaluated properly in isolation, so this led us to a study in some depth of their entire trade patterns with the Free World.

In giving you this report I intend to use the word "plan" to denote an official Soviet or Satellite plan. I intend to use the word "estimate" to refer to an estimate made by your committee.

Now, just so that there is no misunderstanding -- because there has been some publicity to this work -- this report does not delve into policy. We are making no policy recommendations to our Government, which is consistent with the other operations of this Council.

I might say, though, since Mr. Hamon, as he was announced, has lightened up this meeting, that in the Washington vernacular here, they say that this is an intelligence report, and intelligence must sleep with policy but never make it, and that is the background of our report.

(Laughter)

Now, I would like to get on with the conclusions.

The first conclusion we came to is that the Soviet Bloc energy is coal dominated. Now, on this slide we have summarized it.

(Slide)

We have summarized the entire energy production of the Bloc in terms of metric tons of standard fuel. These are approximately equivalent to hard coal equivalent that is used in Europe. Dropping first to the bottom of the slide you will notice that the USSR produces 52% of the entire energy of the Bloc. Half in the USSR, the rest is about equally between eastern European satellites and Communist China. The total energy production of the Bloc is 1,279 million metric tons.

For comparison, the energy production in the U.S. was 1,500 million metric tons of standard fuel.

The important thing from this slide is that in the entire Bloc 71% of their energy is coal. Only 19% is liquid petroleum and 6% is gas. The important thing here is that minor shifts in the production or consumption of coal could be multiplied several-fold on the amount of petroleum that is available for their own use and available for export. The other important thing is, if you go across the petroleum line here you will see that, so far as petroleum is concerned, the USSR is the predominant feature, the petroleum production in eastern Europe and Communist China is very small compared to the USSR.

For this reason, for the reason that the USSR is so dominant, the committee analyzed the entire energy base of the USSR, in all the detail that it could, to be certain that the internal needs of the USSR would not in any way in the future

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create problems in their oil industry, and particularly would not be a bloc to this ever-increasing flow of export oil.

I would like to show you now the energy picture of just the USSR. Next slide, please.

Here you will notice that coal production in the USSR is about 510 million in 1961; 510 million tons. It supplies almost half the energy. Crude oil and gas supply about 40% of the energy and the rest is distributed between hydro, peat, wood, and so forth.

Now, going on to 1965, you will notice that the production of coal increases, but fairly slightly. Natural gas goes up rather rapidly. Now these are committee estimates for 1965:

Coal production, we say, will be 565 million tons. This is only 92% of the official USSR plans. They have never been able to raise their coal production up to their plan in recent years, and we think that this trend will continue, and this is 92% of it. The same is true of natural gas. Although there is a rapid increase, doubling in these four years here in production up to almost 5 trillion cubic feet a year, this number is only 91% of their plan.

In the case of crude oil, however, we are predicting a production of 5,300,000 barrels per day, which is about ten per cent over plan, and this is consistent with their performance for the last three years. In other words, in the last

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three years, each year they have exceeded their plan. Now it is because of this overproduction of crude oil that the total energy production here -- can we move that slide up a bit? There is a bottom line missing -- the total energy production in the USSR comes within one half per cent of their official plan. Therefore, the committee's estimate and the committee's conclusion is that this small deficiency of only one half per cent should have a negligible effect on the plans in the USSR, for industrial growth and for the export of energy and, in particular, their plans for the export of oil to both the Bloc and the free nations.

So having assured ourselves here that the USSR has ample energy to meet its own internal growth and to continue to supply oil to the Free World, we should turn now to analyzing in a little greater depth the Bloc's petroleum balance. Could I have the next slide?

I am reverting back to the Bloc because the USSR is a supplier of petroleum for the total Bloc. In 1961 the total Bloc produced only 3,762,000 barrels per day. This was an increase from 2 million barrels per day in 1956. So the average percent increase from 1956 to 1961 has been about 12% per year. The committee predicts that this production will go to 5,911,000 barrels per day in 1965. As you see, this increase is coming from the USSR. The USSR provided 85% of the Bloc's petroleum in 1956, 86% in 1961, and it is



j19

91% in 1965.

It not only supplies all of the petroleum needed for her own economy, but she makes up the deficiency that exists in East Europe and in Communist China in this balance. The net result here is that your committee predicts that the Soviet Bloc will have available for export 1,020,000 barrels per day in 1965.

Now, I will discuss this number a little later and give you a little background on the basis for this forecast, but I think I would like to turn now, to give you the specific conclusions on the specific phases of the USSR's oil industry and the substantiation of this number.

The first thing we did, as I mentioned, was to study, to the extent possible, the geological prospects of the USSR. The next slide, please.

The magnitude of their sedimentary basins is indeed impressive. I show this on the next slide. These slides are a little difficult. It is awfully hard to put on one slide a nation that literally wraps itself half-way around the globe, but that is what we have here.

The first three classes of sedimentary basins shown in this reddish-brown, yellow, and the green, are what we would consider favorable area. So you have favorable area here, in the Urals-Volga producing region, which is producing upwards to three-fourths of their oil supply today. This is

the old Baku region, the Trans-Caucuses, and a new development region in here (indicating). The gray area is sedimentary area. It is of unknown or poor prospects; and the green area is sedimentary area that we consider nonprospective. So that a lot of the red Russian platform around Moscow we consider nonprospective.

Adding all this up, -- next slide, please -- adding up the area, we have concluded this: that in the total favorable area in the USSR there are approximately 2.84 million square miles. So that can be added basic areas of unknown or poor prospects for 1.14, or total prospective area of 3.98 million square miles. Now, this compares to the Russian report that they have 4.36 million square miles of prospective area, which is within 90% of our estimates, and we figure that it is a fairly good check.

The other significant point here is that we believe that this 2.84 can be compared with the US favorable area of 2.12 million square miles. The 2.12 includes Alaska and includes the continental shelf to a depth of 600 feet. So we concluded that, considering that the favorable area of the USSR is considerably greater than that of the US, and recognizing the present levels of US producibility, we concluded that the petroleum levels in the USSR would not be limited by geological factors for many years.

Now, the USSR is resorting to geophysical techniques

j21 to a greater degree than in the past. This is necessary as prospecting has become more important to them and their search is progressing into deeper fields and into regions where surface indications are not as prominent.

On the next slide I would like to show you the number of geophysical crews the USSR has in the field today and what it looks like they will have in 1965. In 1961 they had 1,168 crews, of which 50 were seismic, in the field. Our estimate of 1965, based largely on their own reports, is that this number will go to 1,682. This is a very impressive number, I think you will agree, and it is particularly significant that already the USSR has more geophysical crews in operation than the entire Free World.

They also make extensive use of core drilling. Their total core drilling footage is scheduled at 20 million feet in 1965. This compares with 12 million feet in 1961 and 10 million feet in 1958. So in view of this, we had no trouble concluding that the USSR is launching a major geophysical and core-drilling effort.

Turning now to their drilling, both exploratory and development, -- next slide, please -- the Soviet Union in 1957 to 1961 has missed their drilling goals by about 11%, for exploratory drilling, and 4% for development. Nevertheless, the total amount of drilling has been increasing very rapidly, as you will see from this slide. And between 1961 and 1965

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they are planning on a production doubling of drilling. The 1960 to 1980 plans are most impressive. You will notice this is an average of about 75 million feet per year.

The drilling today is done largely with a turbodrill. About 85 to 95 per cent of all their drilling is by that technique. It has been of considerable significance in the development of their oil industry, since it provided a fairly efficient and economical method for drilling to moderate depths and enabled the USSR to use their own inferior drill pipe. Had they continued with the rotary rig they would have been forced to import from the West drill pipe and tool joints of higher quality than they manufacture themselves. But they are now undertaking a new search for oil and gas at considerably greater depths. This calls for them drilling to depths of 10 to 13 thousand feet and even greater, and the turbodrill has a lot of deficiencies for this type of drilling. So the Soviet engineers are recommending that the turbodrill be limited to 6,000 feet and beyond that use the electrodrill. But, it too has its difficulties.

The drillers in the field have been calling for the almost exclusive use of the rotary drill. So until these turbo-drilling techniques can be used, if they can, a combination of turbo and rotary drilling will be used. This is going to call for a retraining of their drilling crews and a gearing up of their industry to the rotary techniques again.

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The committee concludes that there will be an increasing need on the part of the Soviet oil industry to seek this technology and this equipment in the Free World. Their drilling rates are very low by our standards, and their plans call for a doubling of drilling efficiency by 1965. We conclude that they will not attain this. They have not been able to push up their drilling efficiency at all in the last few years. Of course this has a direct influence on the number of rigs that they will need and the number of crews, but we suspect that the Soviet planners have allowed for this because for the past three years they have not been able to improve their efficiency. But if they have not allowed for it we would predict that they will be looking to the Free World for rotary drilling rigs.

So up to now I have tried to, in a capsule, present to you the geological potential of this country, the major exploratory and development program that it has undertaken. I think now it would be well to give you what their crude production has been and what we forecast it to be.

I showed you this number before, but I think it would be well to see it -- I gave you the forecast for 1965 before, but I think it would be well for you to see it in a little better perspective. Can I have the next slide?

They have been able to push their production of crude oil from 760,000 barrels in 1960, up to 3,320,000 in 1961, and

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we predict it will be 5,300,000 in 1965. I call your attention to three other numbers, they have an official plan for '70, '75 and '80, and they are looking for most impressive increases in this level of production.

Now, as I mentioned to you once before, of all the major forms of primary energy in the USSR, production of crude oil is the only one that has been in excess of their annual goals for each of the three years of the current Seven-Year Plan. Growth in production has been at a rate of about 12% per year -- 14% per year in the period shown here and for the future it looks like it will be about 12% per year through 1965.

Now, to give you some check point on the 5,300,000-barrel-a-day forecast of '65, we have looked into the effectiveness of their exploratory drilling program, and it seems like they have a consistent plan. To reach the '65 goal of production they are allowing for a drop, a significant drop in the effectiveness of their exploratory drilling today.

Now, admittedly there is a lot of arbitrariness in allocating exploratory drilling and its effectiveness between oil and gas, but we have also looked at the effectiveness of their exploratory drilling for gas based on past experience in the country, and it also looks consistent. So that the committee believes that their drilling plans seem adequate to support this estimate of 5,300,000 barrels per day of pro-

duction by 1965. We think they will reach this production in spite of the fact that they have been missing the drilling target by a small amount. The probability of achieving this level of production possibly depends as much as anything on the degree of importance that the Soviet authorities place on petroleum exports as a political and economic weapon and on the continued supply from the Free World of critical equipment.

We have also taken a quick look at these production levels. We find that in order to reach the level of 1980 shown here, that they will have to find 115 billion barrels of oil in this 20-year period. This is most impressive, I think you will all agree, and it is comparable to the 100 billion barrels which has been found, developed and produced in the U.S.

We did check, however, and note that within their plans the Soviet planners are allowing for the discovery and development of about three-fourths as much oil per foot drilled as they accomplished in the 1948-to-1960 period. So here again it seems that their plans are relatively consistent and somewhat probably conservative in the amount of resources that they have allocated to reach these targets.

One of the greatest problems again in reaching the production goals from 1961 to 1980 will be overcoming their deficiencies in their drilling and producing equipment. And

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we think that these shortages and these problems will become more evident after 1964-1965 than they were prior to that time.

Now, turning now to the refining industry we estimate that -- take this slide off, please, and lights -- that the USSR is attempting to increase its refining industry capacity from 2.6 million barrels a day presently to 5 million. Operated under current practices, this 5 million barrels a day of capacity would be sufficient to process 4.3 million barrels a day of crude oil. This would supply their internal demand and leave about 340,000 barrels a day of products for export. And when you add natural gas, liquids and the synthetics that they make, why, they will have available for export in 1965 about a little over 400,000 barrels a day of products, just products.

Some of the one million barrels a day that we say is their export potential, about 40% of it could be products.

They are experiencing a problem in disposing of their naptha and getting adequate yield of diesel fuel. Their naptha yield will have to go down to 16½ weight percent by 1965 to stay in balance. They have not penetrated the western markets with gasoline and this is because they do not have the quality in their gasoline to make it merchantable in western markets.

It does seem to us, however, that it is entirely



feasible that the Soviet Union will attempt to dispose of their surplus naptha by selling virgin naptha and not gasoline.

Now, their efforts are not limited to production or refining, but transportation is coming in for its share of attention. At the end of 1958, at the beginning of this present Seven-Year Plan, the Soviet Union had in operation only 9,000 miles of petroleum lines and 8,000 miles of gas lines. The Seven-Year Plan calls for construction of twice this length within the seven years.

The major petroleum pipeline systems planned in the current Seven-Year Plan are designed to increase their export capability.

Next slide. These systems -- first of all, the much-publicized Comecon or Pipeline of Friendship. This is a vast system, starting in the Kuybyshev and going strictly east, which carried crude oil to Schwedt, on the East German border, down to Czechoslovakia, Bratislava, Hungary, branches off to two terminals on the Baltic, Ventspils and Klaipeda. It starts as a 40-inch line and has a capacity of -- and we are forecasting it will be completed in 1965. It is approximately 3600 miles in length.

Another important line that is already under construction is the one to Leningrad. It is completed to Gor'kiy today and will be finished in 1963. It has a capacity of a little over 300,000 barrels per day. They are also started on

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a line from Stalingrad to the Black Sea to increase their export capability. This line will deliver 200,000 barrels a day to each of these two Black Sea ports.

Construction is also proceeding on lines that move east from the Urals-Volga. This slide was made up in a hurry and is very poor, and I think I can apologize. But I think I can explain it better with. This is the Pacific Ocean, Sakhalin Island (indicating), Lake Boycar. They are building, as shown in green here, crude oil lines, extending it as far here as Irkutsk. This is under construction.

They are also building product lines to Chita. Under construction but not part of their 7-year plan is extension of the crude oil line all the way here to the Pacific Coast. This is a 2700-mile extension. The lines will have a capacity of about 500,000 barrels per day, and whether they build it or not seems to be dependent on the working out of a trade agreement with Japan. They are attempting to swap crude oil for pipeline to construct this line.

Let's go back to the next slide, please. Your committee concluded that the new pipeline systems in the USSR will have great economic and strategic significance. It will be noted that these lines here will supply crude oil to terminals at which there are great concentrations of Soviet and satellite military forces. It will provide an uninterrupted supply of vital petroleum to these areas which are now depend-

ent on rail. It will also provide for the first time pipeline delivery to naval vessels on the Baltic Sea.

It also has -- these lines also have considerable economic significance. First, of course, is that the export capabilities will be increased. Their export capabilities will be increased by one-half million barrels a day when these systems are completed. And added exports means added purchases of critical material and technology in the Free World.

The second important thing here is that after these lines are built the dependence of the European satellites on the USSR for crude will be further welded and the chances of these satellites turning to the West for sources of supply are greatly diminished.

Third, the pipeline system will mean a significant saving to the Soviet economy. Today they are moving crude oil from Kuybyshev to Klappeda for export and products. Now we calculate that this is costing them on the rails about \$1.05 per barrel, and when they get the pipeline completed it will reduce their cost to 29¢ per barrel.

Now, for the entire decade of '51-61, the USSR failed to achieve its petroleum pipeline construction goals, and for the entire decade they failed by about 20%. Most of the lag encountered in the construction of pipelines occurred after 1955 and can be traced to an inadequate supply of steel pipe and the desire to expand their natural gas system.

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The production of steel pipe after '55 has been running only 75 to 80 percent of their requirements. Now, this performance a year or two ago would have cast considerable doubt on the timetable and the capability of completing these planned lines on schedule. But now there seems to be no doubt about it, that they will complete their lines on schedule. This has been accomplished entirely by resorting to purchases of pipe and other facilities from Western suppliers.

In the period, short period of 1959 to mid-1962 they purchased one million tons of 40-inch pipe in the West. All of this pipe will be delivered through 1964. They got 680,000 tons in West Germany, 240,000 tons in Italy, and 135,000 tons in Sweden. These purchases of 40-inch pipe will supply 40% of their entire requirements in the 7-year plan. By the end of 1961 they had already installed 900 miles of 40-inch line, and yet they hadn't made any more than token amounts in their own mills. Clearly, the imports of pipe from the West has breathed new life into their pipeline system and has averted a delay of far-reaching proportions.

Turning to rail transportation -- could I have the next slide -- your committee concluded that the internal transportation within the USSR does not appear to be a bottleneck to either their domestic petroleum industry or their exports. This slide will show you why. The railroads have been the backbone of their transportation system throughout

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their history, but they have also provided the bulk of their petroleum transportation, 62% of all their petroleum was moved by rail. In 1965 this will drop to 46%, but you will notice that the absolute amount of ton-miles goes up. The significant thing here is that the entire pipeline movement of petroleum of 115 billion ton-miles represents only 10% of the entire load on their rail system. So should there be any delay -- which we do not think now will happen -- but should there be any delay in completing pipeline or inland waterway facilities for 1965, the added load on their rail system would be insignificant.

But on top of this, the Western specialists of the Soviet rail system have concluded that they are allocating enough resources to their rail program to assure fulfillment of their plans. So we conclude that there is little question that internal bottlenecks will develop in their transportation system.

As I mentioned before, the pipeline system will add 1½ million barrels per day of export -- of deliverability to these terminals in the Baltic, Central Europe and Black Sea. We should also remember that USSR is now putting out 800,000 barrels a day without these pipeline systems.

Marine transportation is also getting its share of attention. Starting in 1950, USSR had a fleet of only 174,000 deadweight tons. Today they have a fleet of about two million

tons. They laid down the keel of their first supertanker, so they call it, the Peking, of 29,000 in 1958. And in 1960 and 1961 they delivered two of these ships. Now, this rapid growth up to two million tons fleet has not been accomplished entirely within their own economies. Forty per cent of it has come from the Free World. But the Bloc tanker fleet is continuing to grow through buildings in both the Bloc and the Free World. And as of September 1st they had on order approximately 1,900,000 deadweight tons, the sum of these two numbers. But here again, the significant thing is: On order today is twice as much tonnage in the Free World yards as they are building in their own Bloc yards.

So clearly they are indebted to the Free World for the success of this program. There is one other important thing, in their tanker building program: When they entered the 7-year plan they called for only an increase of 80% in their tanker fleet. But we know today they will increase their fleet by a factor of four. Now, this shows the importance that they are now placing in the transportation of petroleum.

Now, balances made by your committee, around one million barrels a day of export oil, show that the USSR will in 1965 own enough tankers to move about 85% of this volume. If you add to it those customers such as Japan, who prefer to move the tonnage in their own equipment, the Bloc will be

practically self-sufficient and independent of the Free World ships in 1965. Now, when they are thus self-sufficient and moving exports in their own bottoms, they are in a position at any time to cut off from the Free World not only this volume of oil, but the ships. And our estimates say that at this 1 million-barrel-a-day level, should they interrupt the supply of oil in ships, the Free World would need an additional 231 T-2 equipments to supply this oil from alternative sources in the Free World. So we conclude at that time denial of Bloc oil in tankers under these conditions would create serious transportation difficulties.

Up to now I have been giving you the conclusions regarding the existing and potential ability of their petroleum industry. Now I would like to shift your attention to the trade area. In doing this I think I should review, first of all, their growth in petroleum exports. Slide, please.

From 1955 to 1961 their petroleum exports grew from 107,000 barrels a day to 610,000, and it is predicted that they could grow to one million barrels a day in 1965. This is a growth rate from 1955 to 1961 of 34% per annum. And this compares with a Free World growth in consumption of 6% per annum.

53% of their exports in 1961 was crude oil and the remainder of products. Now, of this production, 88% of it came from the USSR. The other Bloc countries really, in net,

supplied nothing, because they over-all have a deficiency.

Now, we have made a country-by-country analysis of the demand patterns, the type of Soviet oil purchasers, and the refining and marketing capacity of these purchasers, and we conclude that in 1965 there are sufficient markets, without a doubt, in the world, that could be induced to absorb one million barrels a day of Bloc oil, but whether there is this much oil that will actually move into the Free World in 1965 will depend on the actions taken by the West between now and then.

Now, we considered it impractical to attempt any prediction of export volumes beyond 1965. However, taking just the published statements of the USSR on their percentage growth in production and demand you can calculate that they will have an exportable surplus between 1,800,000 and 3,700,000 barrels per day in 1972 to 1975. Now, this is a total exportable surplus out of the USSR, and some of it would be needed to make up the deficiencies in the other Bloc countries. Nevertheless, it seems quite evident to us that the export potential will continue to grow after 1965.

Now historically this oil has flowed largely to Europe, about two-thirds flow to Europe. Next slide, please.

On this slide we show you some of the major purchasers by countries of this oil. Of the 610,000, almost 400,000 went to Europe in 1961. Large purchasers, you will notice --



Cuba is still classified in the Free World here -- are Italy, West Germany, Sweden, Finland and Japan; over-all, the percentage of Free World market supplied by Soviet oil is about 6%, but you will notice to some of these countries the percentage is much greater. Eighty per cent of all the Soviet Bloc oil is absorbed by a handful of customers, Italy, West Germany, Cuba, Japan, Sweden, Egypt and Finland. The NATO countries themselves purchased about half of this volume, almost 300,000 barrels a day.

Now, in the next slide I will present to you an analysis of the type of Free World companies which buy Soviet oil. You will notice here that government-owned oil companies provide an outlet, Free World government-owned companies provide an outlet of 62% of the Soviet crude oil that is exported, non-integrated provide 34%. As far as products are concerned, the government-owned oil companies provide an outlet for 20% and non-integrated for about 51%.

So clearly the governments could through their own companies do much to restrict this penetration of Soviet oil, should they desire.

Now, in 1953 the Soviet Bloc exports going to Europe supplied only 1.9% of European demand. And the rapid increases in the export since that time has been at the expense of the Free World industry. To evaluate this we have calculated the loss in revenue to the producing countries over and above this

'53 base and it is shown on the next slide.

It is now running at a rate of about \$145 million per year, and it has cumulatedly now, since 1953, reached almost 500 million. Now, this is loss in direct revenue to the Mid-East and Venezuela, where we think this oil has backed up to.

It does not include losses of indirect payments for wages and services and that that are made in the countries. And it also does not include losses that occurred because of the depressant factor that these sales have had on price.

Although the degree of responsibility is not demonstrable, there seems to be no doubt that the cut-price Soviet Bloc exports contributed to reduction in the posted prices in the Mid-East in 1959 and 1960.

We also considered it impractical to make an attempt to quantify the damage done to the industry, but your committee believes that it was significant.

Now, to fully appreciate the problems of Bloc trade it is helpful to reconsider for a moment just exactly how the USSR conducts it. Among the first things the Communists did when they came into power was to nationalize foreign trade. This was by decree of April 23, 1918. There have been very little changes from this setup since that time. This nationalization of trade makes it entirely subordinate to their economic planning and it provides some very essential things that I think

are important to know.

It protects their domestic economy against all foreign competition, it isolates their internal currency from foreign exchange markets, it gives them an extremely strong bargaining position in dealing with private enterprises in the Free World, it gives them an unlimited ability to discriminate among purchasers and suppliers and it gives them a flexibility to adjust trade to serve their political purposes.

Khrushchev summarized all of these very succinctly when he said "We value trade least for economic reasons and most for political purposes." So clearly Soviet Bloc trade, when it is backed as it is by the monolithic power of the state, can not be considered in the same terms that the trade of individual private companies motivated solely by commercial objectives.

The foreign trade of the Soviet Bloc is but one element of the Soviet Union's plans to consolidate its power and extend its Communistic influence. Specifically, we found that the foreign trade program of the Bloc was aimed, first, at obtaining vital materials and technical know-how from the Free World; aimed at spreading Communism through an extension of state control in countries with whom they trade; it is aimed at destroying the operations of private companies, particularly the oil companies, and it is aimed at creating unrest and political instability.

Now, this trade offensive started in 1953, with the death of Stalin. His successors quickly realized the mistakes that they were making in not trading with the West, in not obtaining some of this vital technical knowledge. In the next slide I will show you this rapid growth in trade since 1953.

It has grown from roughly 1,600,000,000 with the Free World to about 4 billion, either as imports or exports to the Free World. Per cent of Free World trade has gone from two to four per cent.

Now, this trade, trade with industrialized countries, is primarily aimed at acquiring technical knowledge and equipment. And here is a tabulation of the ten industrialized nations, showing the amount of trade that they have with the Soviet Union and the per cent that this trade is of metal shapes, transport equipment, machinery, plants and other manufactured goods, all goods that you can consider of strategic importance to their economy or goods of high technology.

Now, for these, in payment for these industrialized goods the Soviet Union delivers raw materials, particularly oil. They have been particularly interested in obtaining petrochemical plants, electronic equipment, communications equipment, precision tools, construction machinery, carbon steel and alloy strip, sheet and tools. They have bought

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cold-rolling mills, they have bought electric power generation plants, precision bearings, complete tire plants, large diameter pipe, tankers, and so forth. And they are paying for it largely with oil, as I will show you in a few minutes.

In the developing countries of the world the USSR combines the extending of economic assistance with an aggressive expansion of their trade. In these less-developed countries the Soviet Union usually takes agricultural supplies and returns to the countries ferrous materials and some equipment. They have made a big fanfare of taking surplus commodities off of the hands of some of the emerging nations.

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Sometimes they have in turn dumped these surpluses on the Free World markets in competition with the same countries. Two examples of this are when they bought cotton from Egypt and sugar from Cuba. Nevertheless these barter deals with the developing nations have been quite, quite successful.

But the specter of Soviet influence and political penetration doesn't just lie with the developing nations. There has also been evidence of it in the more developed and industrialized nations. Finland and Israel are two examples, and I will skip over them in order to save time.

Now I would like to turn to the place that oil has played in this development pattern of political and economic penetration through trade.

Could I have the next slide?

Here we find that oil coming from the Bloc constituted only 1.6 percent of its total trade in '52, rose to 10.8 percent in '60, but from the USSR, it has grown from 2 percent of their trade to 25 percent. In absolute terms you can see that it went from only \$10 million in '52 to \$344 million in '60.

That is all from a country that in 1950 was a net importer of oil. Clearly petroleum has become the most essential commodity to the USSR in reaching its trade objectives.

Furthermore, the Free World oil industry is a major target of this Soviet economic offensive. This growth in Bloc trade has significance far more widespread than this volume indicates.

From Lenin down to the present day the Communists have looked upon the private oil industry as a major symbol of strength in free enterprise and, as such, the continuing existence and prosperity of the private oil industry poses an obstacle to the spread of their own ideology and influence.

I would like to quote from an article of the Soviet publication in this regard. It stated:

"It should be borne in mind that oil concessions represent, as it were, the foundation of the entire edifice of Western political influence in the less-developed world, of all military bases and aggressive blocs. If this foundation cracks, the entire edifice may begin to totter and then come tumbling down."

Thus the Soviet Union is not out simply to sell oil but to disrupt, undermine, destroy the position of the private oil industry.

The USSR, is using every means to encourage state control over oil in the Free World countries and to incite the leaders of the developing nations the private oil industry. Facilities of course have already been expropriated in Ceylon and Cuba, and industry is under pressure in other

places.

The Soviet Bloc is sending out petroleum technicians and making loans to any country willing to either promote state development and distribution of oil. Countries which accepted such aid range all the way from Afghanistan in the Far East to Argentina in the Western Hemisphere. They have existing today approximately 60 trade and aid pacts involving petroleum.

As previously shown, these government oil companies in turn become large customers of Soviet oil. The trading methods of the Communists, that is, state trading, on the basis of government-to-government barter agreements, weaken seriously the basis for continued private trading in oil.

State trading by its very nature is discriminatory and destructive of free enterprise, and when conducted on the massive scale that the Soviets do and backed up by the monolithic nature of their system, it becomes an even more powerful means of weakening private oil company operations.

An example of this is that the USSR -- next slide -- openly charges its satellites considerably higher prices than it charges the Free World for the same oil. Here we show for the years from '55 to '60 the prices to the satellites is approximately double the price to the Free World.

Better examples of this can be obtained by



comparing the adjoining countries. In 1960, for instance, East Germany paid 2.69 a barrel for curde oil but West Germany paid 1.38; Hungary paid 3.06, Italy \$1.41, Communist China \$2.92 and Japan \$1.34. Product prices of course show the same discrimination.

In conclusion, your committee concluded that the free trade controls are ineffective in retarding the flow of Bloc oil or the critical equipment that the Bloc procures with this oil.

Although the committee may not be aware of all the efforts to restrict Bloc oil that are going on, it believes very little has been done. It is known that there have been some restrictive measures discussed in NATO, and of course we all know that there is active consideration now being given to this problem in the European Common Market.

But equally as serious as stemming the flow of Bloc oil is a lack of effective program for controlling critical equipment that the Bloc is purchasing and paying for with their oil, purchases which the Soviet oil is making a major contribution to today.

The present COCOM agreement among the Free World nations is limited to a very narrow list of arms, atomic energy materials, strategic materials of one sort or another. That agreement is not aimed at the exports of

goods and technology which contribute to the industrial or economic base of the Bloc.

To illustrate this the committee believes that the USSR will seek certain petroleum equipment in the West to insure meeting its petroleum goals and objectives, but not one of these items is on the COCOM list.

Now, the United States maintains much tighter control, but even here in the United States there are more restrictions than the COCOM agreement provides, but there are no restrictions on the export of drill pipe, drill collars, tool joints and diamond bits, items that the committee feels that the Soviets will be looking for.

The United States does require, of course, export licenses for rotary drilling rigs.

It would appear evident that the Western industrialized countries, which know themselves to be threatened militarily and subversively by the Soviet Bloc are defeating their own ends by contributing to the industrial strength of the Communists.

Now, just a word or a concluding remark.

In view of these factors that I have cited, your committee feels that the continued expansion of Communist oil exports is a serious problem to the Free World. The impact of Soviet oil on the Free World countries is far greater than the volume figures would indicate and goes

beyond the immediate implication for the oil companies involved.

Without a doubt Soviet oil is the most important element in the Soviet political-economic offensive in the Free World. The Communists are using it to procure vital equipment and technology, to create political unrest and spread communism. It is a weapon with which they hope to destroy the private oil industry.

The seriousness of the Soviet economic offense requires a concerted effort by the leading countries of the Free World to restrict further imports of Communist oil and the export of strategic material to the Soviets. Individual action is insufficient.

For example, the Black Sea chartering policy of a single company, this was a refusal to charter ships from owners who supplied tonnage to the Bloc, did not stem the flow of Soviet oil to Cuba.

The political alliances which the Free World countries have formed to combat Soviet aggressions must now be extended fully to the equally important economic field. It is unrealistic to leave the Free World's economic flanks unprotected, particularly as the Soviets have indicated that their trade is conducted "most for political purposes."

Thank you.

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(Applause)

MR. WARREN: Gentlemen, I want to express the gratitude of the committee, my personal gratitude to Mr. George Piercy for taking the leadership in this tremendous, what I think was a tremendous undertaking.

I mentioned Mr. Robert Ebel, who Mr. Piercy has told me has done a considerable amount of work in this, particularly in the area of translating oil literature and technical literature of the Soviet Union.

I wonder if Mr. Ebel would stand up and take a bow.

(Applause)

MR. WARREN: Mr. Chairman, I believe there may be one or two people that would like to discuss this a little bit before you put this up for a vote. Would you call on them, or would you want me to?

CHAIRMAN FOLLIS: Would you like to make the motion?

MR. WARREN: I do make the motion that the adoption of the report as presented by the Working Subcommittee for Council adoption.

MR. MAJEWSKI: Second that motion.

CHAIRMAN FOLLIS: Discussion.

Mr. Nickerson?

MR. NICKERSON: Mr. Chairman, I would like to compliment Mr. Piercy on this excellent presentation we

have had this morning. I would like to express regret that because of weather I was unable to attend Mr. Warren's meeting yesterday. I sent him a wire saying that I hope that the committee would be given more time before bringing this extremely important report to a conclusion, and I am pleased to see that the Committee Chairman, Mr. Warren, will ask for more time before completing the tremendous amount of material in Volume II.

But in relation to the recommendation that Volume I be accepted I would like to say that I think this report contains a tremendous amount of exceedingly important information, that it is important that this information be placed in the hands of people not only in our Government but in the governments of the other Free World who will need to take this under advisement, that in the past few days, since we received the draft copy of the report, significant improvements have been made in it.

I recognize that there would be an undesirable delay if we waited for another meeting of the Council before approving this report. For these reasons I would like to associate myself with the recommendation of the other members of Mr. Warren's committee.

CHAIRMAN FOLLIS: Thank you, Mr. Nickerson.

Does anyone else have a comment?

(No response)

CHAIRMAN FOLLIS: If not, are you ready for the question?

FROM THE FLOOR: Question.

CHAIRMAN FOLLIS: It has been moved and seconded. All those in favor please say Aye.

(Chorus of Aye)

CHAIRMAN FOLLIS: Opposed?

It is so ordered.

Thank you, Mr. Warren.

MR. WARREN: Mr. Chairman, there is one thing that I neglected to bring up. The letter of the Working Subcommittee to the parent Committee suggested to the Department of the Interior that revisions of this report periodically would be very desirable, because you are talking in terms of forecasts and things of that kind. It should, more or less, be a moving type of report so that this wouldn't be considered absolutely final and could be changed from time to time as changing conditions may warrant.

That, of course, is just in the way of a recommendation and a suggestion of the Working Committee and seconded by the General Committee to the Department of the Interior, and it is at their election what they want to do.

Thank you very much.

MR. JACOBSEN: Mr. Chairman, I would like to second what Mr. Warren just said about making this a continuing report, and I wonder if it would be possible to make an arrangement where the thing would work automatically, keep the committee alive and have it understood that in a year's time we will have a new one tied into the present one? Could something like that be done, and would it be advisable?

CHAIRMAN FOLLIS: I don't know. Normally we haven't done that. The normal procedure has been that periodically the co-chairman has asked for a bringing up to date of such a report.

Now I would like to discuss that with him with the thought that there could be some variation of this procedure. But offhand, I think probably that is a pretty good procedure. We might, in this case, on an annual basis or some reasonably frequent basis bring our report up to date just as our crude producibility report has been brought up many times, but I would like to discuss that with Secretary Kelly.

MR. JACOBSEN: I make the suggestion precisely because of the importance of this subject. I don't think we have ever had a report on the subject as important as this one.

CHAIRMAN FOLLIS: I agree with you.

Gentlemen, we are running a little bit behind

schedule here as a result of this report, but I think you will agree with me it was worthwhile.

Now, we have a number of visitors from various Government departments, and I would like to ask them to stand and be recognized. I will read off the names of the heads of the various groups who are here, and if you will stand, and then if the Council will give their welcoming applause after we complete the introductions in the interest of time, I would appreciate it.

The first is Mr. Claus Ruser, Acting Chief of Fuels Division of the State Department.

Mr. Ruser.

Is he here?

Then we have Mr. William J. Lamont of the Anti-trust Division.

We have the Honorable Glenn V. Gibson, Acting Assistant Secretary of the Department of Defense.

We have Mr. Eben Honney, Deputy Assistant Secretary of the Treasury Department.

We have Mr. Joseph Lerner, Office of Emergency Planning.

We have Mr. Bruce M. Easton, Assistant Deputy Administrator for Price and Products of the Department of Agriculture here.

We have Mr. Ernest Rubin, Director of the



Sino-Soviet Division, Department of Commerce.

We have Mr. C. K. Faught, Acting Director, office of Emergency Transportation.

We have Mr. William Allen, Chief of the Division of Operations, Maritime Administration.

We have Mr. John Tannhauser, Petroleum Advisor, Agency for International Development.

We have Mr. Hugh Lamberth, Central Intelligence Agency.

Gentlemen, I think we might welcome these here.

(Applause)

CHAIRMAN FOLLIS: We appreciate your being here.

Now, Mr. Lawrence J. O'Connor, Vice Chairman of the Federal Power Commission, is with us today.

I would like to welcome Mr. O'Connor and hope he might say a few words.

(Applause)

MR. O'CONNOR: Thank you, Mr. Follis.

Chairman Swidler asked me to express his appreciation of being invited to attend this meeting. Unfortunately, he had previous commitments.

I would just like to comment briefly that probably the most gratifying thing that has happened in our Commission since I was here the last time is our settlement program which the members of the Council who are in the pipeline

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transmission industry, of course, have been familiar with for many years in the past.

I do want to say, though, that we have now, for the first time, made significant strides in adopting settlement programs for producer prices, and many of you fellows here, I know, who are sitting at the tops of your companies where these settlements finally get to your desk, involves considerable stretching of the conscience because they involve changing your contract prices, but I do want to say that the people that represented you at the level where these settlements have been produced, have done a tremendous job.

I believe on the part of the Federal Power Commission I can say in many cases they have found our staff, they have found the distributing companies and the state regulatory commissions very flexible in trying to adapt these settlements to the ceiling price guidelines which we are committed to at the present time.

I do think that it has shown a tremendous cooperation of the industry and various groups in the industry, and I hope it is going to help us produce a more stable situation.

Thank you.

(Applause)

CHAIRMAN FOLLIS: Thank you, Mr. O'Connor.

Now, we have Mr. Jerome J. O'Brien, Director of

the Office of Oil and Gas.

Mr. O'Brien.

MR. O'BRIEN: Thank you, Mr. Chairman.

In reply to Jake Hamon, I regret that the Committee to Add Culture to the Council couldn't come up with a report that they would accept. However, sure and begorra, we asked the help of Mr. Francis O'Porter.

It is indeed gratifying for me to attend another meeting of the Council, as it has been some five years since I attended before as an ex officio member. This is my first meeting as the Director of Office of Oil and Gas.

As many of you gentlemen know, the transition from industry to Government is a bit paradoxical. But as Dr. Samuel Johnson once said, if a man is to be hanged in thirty days, it wonderfully concentrates the mind.

(Laughter)

MR. O'BRIEN: I am therefore deeply conscious of the changes in my functions and my responsibilities. In connection with those responsibilities, we in the Office of Oil and Gas are indeed grateful for the assistance of this Council, which it has provided and made available to the Government, its time and its talents.

Today the Council approved the report by the Transportation Committee. This is a report on all petroleum transportation facilities in the United States. As stated

by the Chairman, Mr. Spaght, it was accompanied by three sets of maps, consisting of 87 individual maps, each, on the pipeline of crude oil, natural gas and petroleum products.

These maps represent a high degree of workmanship and engineering detail and are, without doubt, the finest set of maps ever prepared on United States petroleum transportation.

The report and the maps which the Council has presented to us in this transportation report are invaluable to the Office of Oil and Gas in its emergency planning. The study on the impact of Soviet oils represents a Herculean task of sifting Russian data and the compilation of statistics by the Subcommittee.

The report which has been discussed by the Chairman, Mr. Warren, and has been illustrated by the Subcommittee Chairman, Mr. Piercy, is a veritable encyclopedia of Soviet energy and will be a valuable contribution to the Government.

The data contained in this report will be useful to combat the Soviet oil offensive in its world energy race.

I wish to commend the Chairman of the Working Subcommittee and his staff and the Chairman of the Committee, itself for the vast amount of work which has been performed on this subject.

These two projects serve as an excellent example of the contributions this Council continues to make through the years, not only increasing the mutual understanding of Government and the petroleum industry in its many problems, but by providing Government a significant element of security, obtainable in no other way, through comprehensive, dependable and highly specialized information, in today's complex and rapidly moving political climate the need for such vital support is daily impressed upon the Government officials.

Confronted with the inevitable problems accompanying this change the prospect therefore is for a continuing series of requests of various studies, such as the two new ones considered by your Agenda Committee prior to this meeting.

I look forward with pleasure to an association which I am sure will be productive of much to our mutual advantage in the interest of the nation.

As you know, the Office of Oil and Gas has been the focal point of information within the Government and all phases of petroleum and gas industry. It is our hope and intent, with your help, to increase our participation in the development of policy and to increase the value of our service in the support of the petroleum security.

Thank you.

(Applause)

CHAIRMAN FOLLIS: Thank you, Mr. O'Brien.

Now we have with us today Vice Admiral Burton B. Biggs, Director of Petroleum Logistic Policy for the Office of the Assistant Secretary of Defense.

Admiral Biggs.

ADMIRAL BIGGS: Mr. Chairman, Mr. Secretary, gentlemen:

I don't know why I always wind up at the end of this.

Now, somebody probably wonders what you mean by the Director of Petroleum Logistics Policy. It would be very presumptuous for me to try to define petroleum to this august assemblage. It just so happens that in my particular case Petroleum means oil, grease and certain intra-extra-mural politics.

(Laughter)

ADMIRAL BIGGS: Logistics, as they called me in the Fifth Fleet, is vice president in charge of stuff and things.

(Laughter)

ADMIRAL BIGGS: That is the best definition of logistics I know. I tried to look in the dictionary to find out what Mr. Webster said "policy" was and I got a shock, because it says there in certain places that a policy

is a stratagem, a contrivance, a trick. (Laughter) In another place it says it is a kind of fixed system of procedure, in government or other activities.

Now, I hope the first definition, we say no, that isn't it; but unfortunately we are in the position of probably having to say to the second that the answer is no also. The fixed business in this business is non-existent, I am afraid, on both sides of the family.

Now, I appreciate the work of this Council very much because I was the recipient of the first draft of the first letter prepared by a certain gentleman in the then Petroleum Administration for War in May 1946. So I have had a little experience with it off and on. I keep coming back like the bad penny. Some day I am going to quit. Nobody seems to know when.

We have had an Ad Hoc Group over in our place for about a year and a half, taking a look at the number of petroleum products we have in the supply system and we have made a desperate effort to reduce it by various means.

At the present time it is agreed by all three departments, the military departments, that we will have overseas aviation gasoline of 150 and 145 performance number and no other. We will probably try to apply that to the Continental United States, when a few military aircraft of almost unbelievably old vintage will go off

the strip.

Some time ago we started out with 1600 specifications. We got rid of 800 of them. Unfortunately, we got back 200 new ones. At any rate, we had a gain, a net gain in the 600 that went out, at least temporarily.

Now where you gentlemen come into this specification business, outside of your general objection to our method of writing and applying them, is that every once in a while we send out one for you to chew over. You have one at present called "C.I.E. Fuel Job, Compression, Ignition Engine." You remember the gentleman said that this particular engine is the one with the cylinder full of "ignition juice" waiting for some fuel? Well, we are waiting for specifications of that fuel.

So when you get these weird questions from us and from Jerry O'Brien's place, will you please answer them as soon as possible? We really would like to know.

Thank you.

(Applause)

CHAIRMAN FOLLIS: Now we will have the report of the Secretary-Treasurer.

MR. JAMES V. BROWN: At the beginning of the year, calendar year, that is, January, in the general funds we had \$60,904. You members have been very kind to respond to the call that Mr. Hallanan made earlier in the year for



funds and the contributions, plus moneys received on interest earnings and so on, add to \$117,866.

Somehow or another we have spent 93,000 of that, \$93,226. Some of these reports might give you an idea how we got that high.

The balance in the bank at the end of September is \$85,543. We hope to carry through to the end of the year on that money.

We do have some reserve funds for general purposes and pension purposes and so on. That represents an investment of \$145,000. They are invested in Government bonds and Government-insured banks. That is the condition of the finances at the present time.

I have an announcement.

CHAIRMAN FOLLIS: All right.

MR. J. V. BROWN: To any member who came in after the roll call, and I understand there were a few, if they would be kind enough after the meeting to come to the reporter and give their name, please.

Thank you, sir.

CHAIRMAN FOLLIS: Thank you, Mr. Brown.

Gentlemen, that concludes our agenda. There is no new business, a motion to adjourn is in order.

FROM THE FLOOR: So move.

FROM THE FLOOR: Second.

CHAIRMAN FOLLIS: All those in favor?

Very well.

Would the Chairmen of the Committees reporting today please wait.

(Whereupon, at 12:10 o'clock p.m., the Council was adjourned.)