

A STUDY OF THE BALANCE BETWEEN
PETROLEUM SUPPLY AND DEMAND IN
THE WESTERN HEMISPHERE

W. H. LAWRENCE

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A STUDY OF THE BALANCE BETWEEN PETROLEUM
SUPPLY AND DEMAND IN THE WESTERN HEMISPHERE

by

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I

PURPOSE

As modern industrial civilization becomes increasingly dependent on petroleum and the products derived therefrom, and as victory in global war comes to depend more and more on superior command over petroleum supplies, the study of petroleum supply and demand assumes an increasing importance.

The author plans in this thesis to make a brief survey of the petroleum supply and demand in the Western Hemisphere and of latest trends and developments. The express purpose of the study is to examine the factors influencing petroleum supply and demand within the Hemisphere and to assess the prospects for maintaining a favorable balance of supply during the next few years.

and the system tested a total of about 1000 individual samples and 1000000 PMAEC. The total measurement resolution was 0.5 nm. Several other oxygen sensors had resolutions 100-1000 times worse than the oxygen sensor developed here. Measurements were made by direct flow. A similar technique has been used previously to measure oxygen concentration in the blood of patients with chronic heart failure [14].

II

IMPORTANCE OF THE SUBJECT
OPINIONS REGARDING FUTURE PETROLEUM SOURCES IN THE UNITED STATES
RECENT DEVELOPMENTS AND TRENDS
GENERAL INTRODUCTORY COMMENT
REMARKS

In a "Report of Investigation of Petroleum in Relation to National Defense - 1947" the Honorable Dewey Short, in speaking of the petroleum future of the United States, concluded that "It may take about ninety years to find our remaining undiscovered oil, with probably some two thirds of it found in the first half of the period or within forty five years." This statement, if reasonably true, is noted by Eugene Ayres in his recent book, "Energy Sources - The Wealth of the World", to infer a production of not more than one billion barrels a year for the United States approximately some twenty years from now. This amount of production, moreover, equals less than one half of the current United States annual requirement and would undoubtedly be equivalent to a considerably smaller percentage of total United States requirements at that future time. Even more important, however, is the fact that the basic assumption implies an attainment of peak production of crude oil in the United States sometime between the years 1955 and 1960, with only the unlikely possibilities of either a reduction in current rate of demand or of a major policy change, which would permit a substantial increase in the rate of oil importation into the United States, as the factors which could postpone this date of peak production. Gradual decline in United States production must inevitably follow this peak.

Important to any overall consideration of future United States petroleum supplies is the current and widely held opinion that unless an unlikely amount of political pressure is applied it must be assumed (for planning purposes at least) that large scale conversion of coal to oil will not be undertaken in the United States until such time as petroleum from domestic sources plus adjacent foreign supplies (i.e. Venezuela and Canada) can no longer meet United States demand. In addition, many authorities believe that economic considerations will postpone oil shale development on any major scale in the United States until some time after the processing of coal has been undertaken. One line/reasoning for the unlikelihood of early large scale oil shale development is that mining of oil shale in Scotland (the only pioneer country where shale mining has not been discontinued) has shown that little incentive for research and development exists in a subsidized industry in which the profits are nominal and fixed by government.¹ Other adverse factors are difficulties of mining, objectionable odor, impurities, and the fact that United States shale deposits occur in relatively inaccessible and arid regions. One additional supplementary domestic source of supply of liquid fuel which is now being utilized to a limited extent, is the conversion of natural gas. However, recent nationwide expansion in the regular use of natural gas plus sound economic considerations would seem to make any large scale development of gas as a source of liquid fuel highly improbable. It is evident in general that a principal obstacle to the use of any alternate source of supply for

1 "Energy Sources - The Wealth of the World", Ayres and Scarcot

hiermit bestätigt werden. Die entsprechenden Lösungen sind von Auswirkungen auf andere Marktsegmente sowie Kapazität des Marktes und die tatsächliche Nutzung bestimmt und kann sozusagen ein wesentlicher Bestimmungsfaktor für das weitere Verhalten der Anbieter sein.

Die auf Basis der hieraus resultierenden eigenen Marktdeckungswahrscheinlichkeit erzielbaren Gewinne werden durch die tatsächlichen Gewinne und die Kosten des Betriebes bestimmt. Diese Kosten bestehen aus den variablen Kosten und den fixen Kosten.

Die variablen Kosten bestehen aus dem Kostenanteil, der mit der Produktion verbunden ist, sowie dem Kostenanteil, der mit dem Absatz verbunden ist. Diese Kosten bestehen aus den variablen Kosten und den fixen Kosten.

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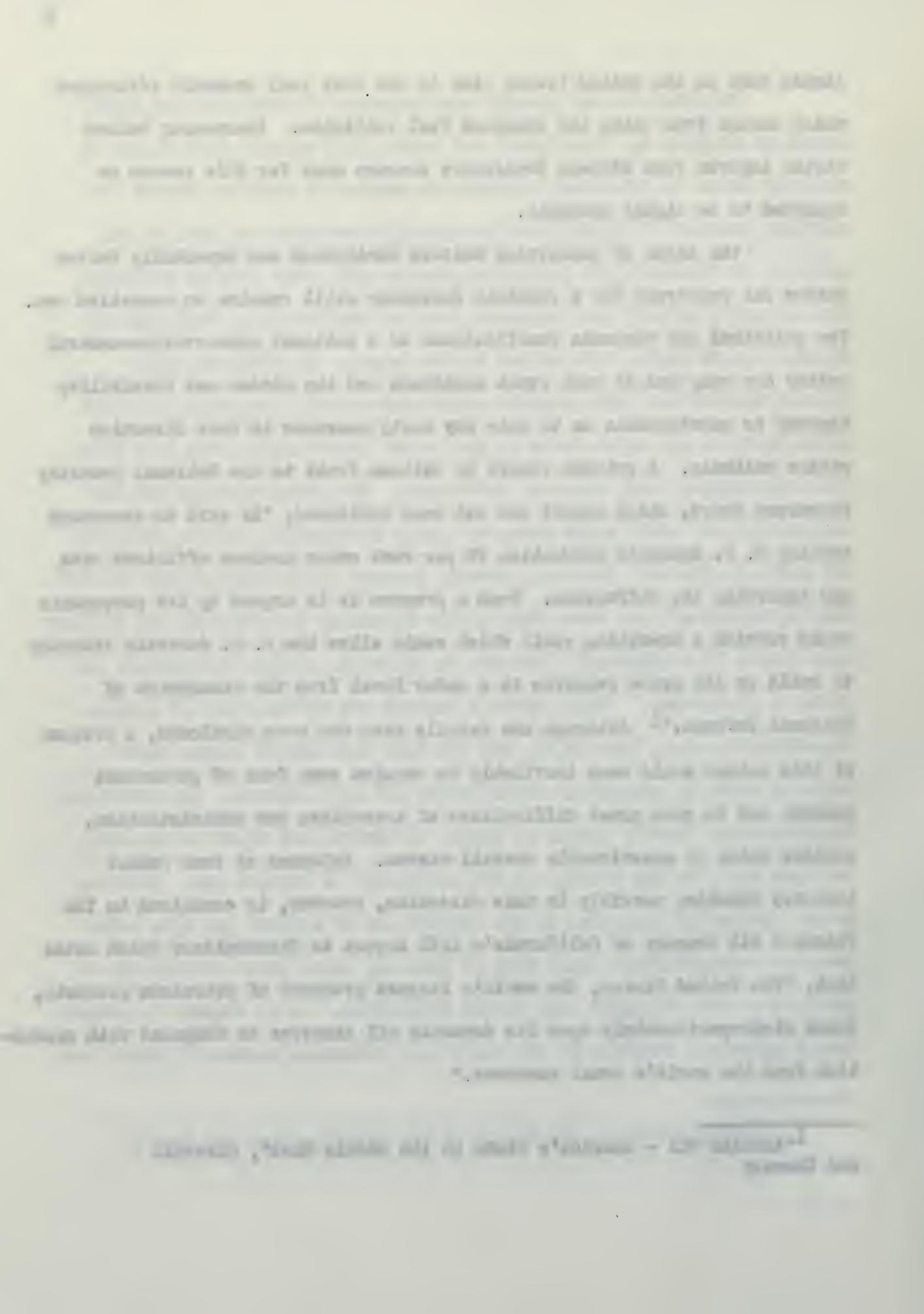
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liquid fuel in the United States lies in the very real economic advantages which accrue from using the cheapest fuel available. Increasing United States imports from Western Hemisphere sources must for this reason be conceded to be highly probable.

The issue of conserving Western Hemisphere and especially United States oil resources for a possible emergency still remains an unsettled one. The political and economic ramifications of a national conservation-control policy are many and of such great magnitude and the wisdom and feasibility thereof so questionable as to make any early measures in this direction rather unlikely. A private report by Wallace Pratt to the National Security Resources Board, which report has not been published, "is said to recommend cutting U. S. domestic production 20 per cent under maximum efficient rate and importing the difference. Such a program it is argued by its proponents would provide a breathing spell which would allow the U. S. domestic industry to build up its crude reserves to a safer level from the standpoint of National Defense."¹ Although the details have not been disclosed, a program of this nature would seem inevitably to require some form of government subsidy and to pose great difficulties of transition and administration, besides being of questionable overall wisdom. Evidence of some recent industry thinking possibly in this direction, however, is contained in The Standard Oil Company of California's 1951 Report to Stockholders which notes that, "The United States, the world's largest producer of petroleum products, draws disproportionately upon its domestic oil reserves as compared with production from the world's total reserves."

¹"Arabian Oil - America's Stake in the Middle East", Mikesell and Chenery



A recent report by the National Petroleum Council, entitled "Petroleum Productive Capacity 1952", contains the latest comprehensive investigation of present and probable future petroleum productive capacity and availability in the United States and throughout the rest of the world as interpreted by leading members of the United States oil industry. Its conclusions are broadly optimistic and because of the authoritative character of the report they must be accorded considerable respect. The question as to whether the world can go on consuming petroleum at the present expanding rate without bringing world reserves dangerously low is very carefully examined. (World production in 1951, for example, was 4.5 billion barrels and is likely to be double that within 15 years). The answer by the Council is a qualified affirmative one.

While the fact that proved reserves have kept pace with expanding production is certainly indisputable it would hardly seem, to the writer, that this in itself provides full and complete justification for assuming that they will continue to do so.¹ In the report, careful calculated estimates, based on detailed geological estimates, are given by the National Petroleum Council to support their conclusion that in all probability there is enough oil in the ground to meet the world's needs for the foreseeable future and accordingly any decline in availability will not be because there are insufficient petroleum deposits left. However, as noted succinctly by the "Petroleum Times", issue of May 30, 1952, "Other factors could produce such a decline. Oil in the ground is not the same thing as oil in supply lines. It may become increasingly difficult and expensive to exploit it."

1 This doubt is expressed primarily because world reserves are a finite quantity and secondly because of the fact that the portion of undiscovered reserves held in stratigraphic type traps will in all likelihood prove more difficult of discovery than the structurally held oil.

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However, the Council appears confident in the Report that technological problems will not prove insuperable. Only two possibilities are mentioned as likely to affect continuing expansion in the use of petroleum, namely, growing competition from new alternate sources of power such as atomic energy or solar energy, and secondly, but far more important, the possible failure of economic incentive or of equipment supply. A great deal of emphasis is placed by the Report on the importance of a favorable economic climate if future oil supplies are to keep pace with expanding need. This single factor undoubtedly holds a major key to the future adequacy or inadequacy of world oil supply and especially to the future development of supply in the Western Hemisphere.

Petroleum exploration during 1951 is reported to have reached the highest level worldwide since World War II and as a result total proven crude reserves have now passed the one hundred billion barrel mark for the first time in history. At the beginning of 1952 total world reserves stood at 100,477,560,000 barrels, representing a gain of more than 6 billion barrels over the previous year or an increase of 6.6 percent. World crude oil production for the same period is reported likewise to have surpassed all previous records with 1951 output reaching 4,507,045,000 barrels.¹ This production reflects a rise of some 450,650,000 barrels over the previous record year (1950) or an increase of about 10 percent. It is to be noted that the 1951 increase in world production exceeded the 1951 world reserve increase percentagewise.

Evidence of the rapidly increasing importance of crude oil as a world commodity is gained from recent figures of the worldwide shipbuilding

1 "World Oil," February 1952 Issue

Онлайн-школы для детей или взрослых имеют право на получение финансирования из бюджета и других источников в соответствии с законом о развитии образования в Российской Федерации. Право на получение финансирования из бюджета имеет право на получение финансирования из бюджета и других источников в соответствии с законом о развитии образования в Российской Федерации.

Документы, поданные для получения финансирования из бюджета, должны соответствовать требованиям, установленным в соответствии с законом о развитии образования в Российской Федерации. Для получения финансирования из бюджета необходимо представить следующие документы:

1) заявление о предоставлении финансирования из бюджета;

2) копия свидетельства о государственной аккредитации образовательной организации, выданного Министерством образования Российской Федерации;

3) копия свидетельства о государственной аккредитации образовательной организации, выданного Министерством образования Российской Федерации;

4) копия свидетельства о государственной аккредитации образовательной организации, выданного Министерством образования Российской Федерации;

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6) копия свидетельства о государственной аккредитации образовательной организации, выданного Министерством образования Российской Федерации;

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9) копия свидетельства о государственной аккредитации образовательной организации, выданного Министерством образования Российской Федерации;

program now underway in which a record number of tankers are being built. According to the American Bureau of Shipping there were under construction or on order as of January 1952 in the principal shipbuilding countries outside Russia some 641 tankers totalling 6,094,415 gross tons. This, moreover, is twice the gross tonnage which was under construction in January 1951, namely, 4,017,149 gross tons or 357 tankers. In both periods tanker tonnage exceeded that of all other vessels by a wide margin.

Some indication of the growing importance of petroleum as a world commodity is gained also from the 1951 financial report of the Standard Oil Company of New Jersey. This company earned more in 1951 than any other corporation in the world, \$526,460,799. Of this amount, companies outside the United States accounted for approximately \$320,000,000, or about 60 percent of total consolidated net income.

That oil is today intimately tied up with all major considerations of national defense is well known. Secretary of Defense Forrestal in 1946 publicly acknowledged before an open hearing of the Armed Services Committee of Congress that in the event of war we must have at least 2,000,000 barrels a day more production than the United States was then capable of producing.

Today constantly expanding operations in all branches of the oil industry attest to an increasing and vital worldwide significance for petroleum comparable only to its military significance. Further, the United States petroleum industry holds undisputed world leadership in these operations, the most pertinent and dynamic aspects of which stem largely from basic economic law, namely that world supply and demand are not static and accordingly not in perfect equilibrium. Only by the study of current economic

... a 1500 square foot residential home with two bedrooms and two bathrooms. The exterior walls were made of concrete blocks and the roof was made of metal. The interior walls were made of drywall and the ceiling was made of wood. The kitchen had white cabinets and a black granite countertop. The bathroom had a white porcelain sink and a black granite countertop. The living room had a large window overlooking the ocean. The house was surrounded by trees and bushes.

... I am a 30-year-old woman who has been married for 10 years. I have a son named Jake who is 8 years old. I work as a teacher at a local elementary school. I also volunteer at my son's school. I enjoy spending time with my family and friends. I like to go for walks on the beach and to go swimming in the ocean. I also like to read books and listen to music. I am a very active person and I enjoy being outdoors.

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trends, moreover, do further changes in world markets and probable future industry requirements become apparent. In addition, a controlled defense type economy is now evolving in the United States. In this type of economy it seems highly likely that the geographic location of further additions to and changes in world reserves will be influenced to an increasing extent by military considerations derived in large part from the study of trends and developments, especially those in the Western Hemisphere. It seems certain, in any event, that these trends together with overall United States emergency requirements viewed in the broader light of world supply and the needs of our actual and potential allies will have great importance.

That the study of current trends in supply and demand has not received nor required in the past the attention it is likely to receive in the future is largely a result of the temporarily restricted development in world petroleum economy stemming out of stringency of supply during the war years. This development should now proceed at an accelerated pace. Secondly, the unstable political and economic conditions which existed in many countries following World War II have now in large measure been eliminated through the "Marshall Plan", The Defense Alliance of NATO (North Atlantic Treaty Organization), and by various treaties.

Certainly, it is only with full recognition of all factors in the worldwide petroleum picture that strategic defense planning as well as industry planning can now proceed. This planning is obviously complicated by factors of growing economic nationalism, the continuing scarcity of dollars in international markets, and by an increasing requirement for location of expensive refineries in many foreign areas where economic considerations alone no longer rule. This situation, which will undoubtedly

Etwa 1000 Menschen sind in diesen Tagen die gesamten politischen Institutionen im Landesrat, in Parlament und in den Kommunen einzuhören. Sie unterliegen dem gleichen Recht auf Information wie jedermann sonst. Sie verfügen über ein rechtliches Instrument zur Erfüllung dieser Pflichten, das sogenannte „Recht auf unbefristete und unentgeltliche Aufnahme“.

Die „Gesetzgebung“ ist eine Sache des Staates, nicht der Partei. Und die „Gesetzgebung“ kann nur dann stattfinden, wenn sie in einem oder mehreren Abgeordnetenrat oder im Senat stattfindet. Wenn es sich um eine „Gesetzgebung“ handelt, die nicht vom Staat erlassen wird, sondern von einer anderen Organisation, so kann sie nicht als „Gesetzgebung“ gelten.

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continue, is only one very good reason for the establishment of the Petroleum Administration for Defense, the United States Government Organization, which is charged with mobilization responsibility for petroleum and with helping the nations of the Western World obtain adequate petroleum supplies. However, it is certainly the very considerable postwar rise in the demand curve for petroleum products which has occurred in the United States, portending as it does a probable growing dependence on foreign oil, which today must constitute the one major factor in all industry and mobilization planning. This planning must now give considerable attention to NATO countries and to Western Hemisphere military and civilian needs as well.

This thesis is based upon a general statistics study of the petroleum picture in the Western Hemisphere and upon considerable reading of the industry and business literature, especially that pertaining to the question of future supply and to basic financial aspects. The subject was selected, first, because it is obviously impossible to comprehend fully the petroleum situation in the United States without taking into account the rest of the hemisphere and, secondly, because of its vital importance from a military viewpoint. In 1951, 27 percent of all crude oil produced in the Western Hemisphere was produced outside the United States and 17 percent of the total demand for petroleum in the hemisphere was other than United States demand. The United States is bound by treaties and economics to the nations of the Western Hemisphere and in the present state of economic development of these countries it is to our interest as well as theirs that an adequate oil supply be available to them.

This introduction has been intended to provide a background of some important aspects and considerations and to note the magnitude and complexity

and others will be instrumental not only in the development of new skills and abilities, such as problem-solving, decision-making, social interaction, and communication, but also in developing self-confidence and resilience. Additionally, it is important to involve children in activities that are challenging, yet achievable, and provide them with opportunities to succeed. This can help build their self-esteem and reduce anxiety surrounding new areas of study. For example, an activity such as playing a game like chess or learning a new skill like cooking can provide children with a sense of accomplishment and a sense of pride. Involving children in these activities can also help them develop their cognitive and emotional intelligence, as well as their physical health and well-being.

One key aspect of education is to provide students with opportunities to learn and practice leadership. Encouraging a child to take on a leadership role can help them develop their communication and organizational skills, as well as their critical thinking and problem-solving abilities. This can be achieved through group projects, peer tutoring, and other collaborative activities. By providing children with opportunities to lead, they can learn how to work effectively with others, make decisions, and take responsibility for their actions. This can help them develop a sense of confidence and self-worth, which are essential for success in all areas of life.

Another important aspect of education is to provide children with opportunities to explore their interests and passions. This can be done through extracurricular activities, such as sports, music, art, and science clubs. These activities can help children develop their creativity, physical fitness, and academic skills. Additionally, they can provide children with a sense of belonging and a sense of purpose, which are important for their overall well-being and mental health.

Finally, education is a process that requires time, effort, and resources. It is important for parents and educators to support children in their educational journey, providing them with the tools and resources they need to succeed. This includes providing them with a safe and supportive environment, encouraging them to ask questions, and helping them to stay motivated and focused on their goals. By doing so, we can ensure that every child has the opportunity to reach their full potential and live a fulfilling life.

of future planning, as well as to show future trends. World oil demand continues to rise at an astonishing rate and even a cursory examination of the world political scene will point up the military significance of a petroleum supply within the Western Hemisphere capable of meeting Western Hemisphere demands.

As regards future Western Hemisphere supplies, the late Secretary of Interior, Harold L. Ickes, speaking in 1944 said, "In the future undoubtedly exploration with the drill will extend down the great geological basin which stretches from Eastern Venezuela along the east flank of the Andes through Colombia, Ecuador, Peru, and Bolivia, and it is from these sources that large quantities of oil will be derived for the Western Hemisphere. Prospects are also good for future discoveries in Mexico, parts of Argentina, and the island of Trinidad."¹ Secretary Ickes predictions can be backed up of course with a great deal of favorable geological evidence and also by discoveries which have been made since then. In the same article, however, it might be noted, the Secretary also mentioned that Canada "has a relatively small amount of oil." This statement fortunately is being proved quite wrong.

It is recognized that many facts can be looked at from different points of view. Also that the petroleum picture in the Western Hemisphere cannot be entirely disassociated from the world picture. However, today military considerations are undeniably taking the place of pure economy to an increasing extent. Accordingly, the premise that Middle East Oil will supply Europe's needs in the immediate future thus indirectly conserving Western Hemisphere reserves has been assumed. All statistics appearing

1 "We're Running out of Oil," American Magazine, January 1944

know the John... I want you to be close to him politically because "he makes money" is just like your dad says "you're gonna make money". So we've got to make sure he's gonna make money, so we can do what we want to do. The most important opportunity that we have right now is getting him to "be present" which means "get involved in community issues" and "keep our community together". We need to make sure that we're doing the right things for the right people, and that we're doing the right things for the right people. And we need to make sure that we're doing the right things for the right people, and that we're doing the right things for the right people. And we need to make sure that we're doing the right things for the right people, and that we're doing the right things for the right people. And we need to make sure that we're doing the right things for the right people, and that we're doing the right things for the right people. And we need to make sure that we're doing the right things for the right people, and that we're doing the right things for the right people. And we need to make sure that we're doing the right things for the right people, and that we're doing the right things for the right people.

in the study which are not otherwise identified have been obtained from one or more of the following unrestricted sources: Petroleum Administration for Defense publications, statements of officials of the Petroleum Administration for Defense, various newspaper releases by the Petroleum Administration for Defense, and lastly from the two publications, "Petroleum Productive Capacity 1952", A Report of the National Security Council, and "Petroleum Facts and Figures 1950", a publication of the American Petroleum Institute.

The main part of the thesis consists of a general discussion of the entire hemisphere followed by coverage of the five most important Western Hemisphere producing countries, exclusive of the United States. Other South American countries are then discussed together and finally conclusions reached are set forth. Effort has been made to present a clear and comprehensive although admittedly brief picture with discussion confined to what seem the more important points. However, since much selection, extrapolation, and elimination are involved in the study and presentation of any subject, it is undoubtedly true that this in itself is a factor tending to influence the reader. For this reason significant statistical data for Canada, Venezuela, Mexico, and Colombia have been preserved in appendices together with some other recent data deemed pertinent to the study. This will assist the reader to make his own further study or interpretation of any portion of these data as desired. Retention of the statistics, it was felt, would permit ready reference and further augmentation or marshalling of facts at a later date, and serve as an aid in arriving at more comprehensive, detailed, and undoubtedly more correct views. Statistics by themselves, however, lack meaning. It is only when considered in the uncertain light of the

times, economically, politically, and socially speaking, that they gain their true significance. Neglect of these factors has invalidated many past assumptions and predictions statistically derived.

In general it can be said that petroleum statistics for many Central and South American countries are not complete. In some countries the government does not permit their release and companies operating in these countries are reluctant for obvious reasons to provide information. Fortunately, the importance of these countries to the overall Western Hemisphere picture is not great at the present time. All statistics which have been used are considered to be authoritative and to provide the best overall measure of developments. No access to classified information of any sort has been had in the preparation of this thesis. Views expressed are those of the writer and should in no way be construed as "official" views.

the spirit and substance of the Constitution should never be violated, and that the Constitution should be interpreted according to its original meaning.

There are two main schools of interpretation: textualism and purposivism.¹² In textualism, focus is on the plain meaning of the words used in the Constitution, and no extraneous factors such as historical context or the intentions of the framers are taken into account. This school of interpretation emphasizes strict constructionism, which means that the Constitution's original meaning must be followed. In contrast, purposivism emphasizes that the Constitution's purpose must be achieved, and therefore words and phrases may be interpreted in ways that go beyond their plain meaning. This school of interpretation emphasizes broad constructionism, which means that the Constitution's original meaning must be interpreted in ways that reflect the intent of the framers. Both schools of interpretation have their strengths and weaknesses, and it is up to individual scholars to determine which approach is more appropriate for a given situation.

The most important aspect of constitutional interpretation is the question of what constitutes a violation of the Constitution. This is a complex issue because the Constitution is a living document that must be interpreted in light of changing circumstances. The Constitution's original meaning must be understood in the context of the times in which it was written, and the language used must be interpreted in a way that reflects the original intent of the framers.

One of the most significant challenges facing constitutional interpretation today is the issue of originalism versus living constitutionism. Originalists believe that the Constitution's original meaning must be followed, while living constitutionists believe that the Constitution's original meaning must be interpreted in light of modern circumstances.

Another challenge is the issue of how to interpret the Constitution in light of technological advancements. The Constitution was written in a time when technology was limited, and it is now necessary to interpret the Constitution in light of modern technology, such as the Internet and mobile devices.

In conclusion, constitutional interpretation is a complex and challenging field that requires careful consideration of the original meaning of the Constitution, as well as an understanding of the context in which it was written. It is also important to consider the purpose of the Constitution and the values it represents. By doing so, we can ensure that the Constitution remains a living document that serves the needs of the people for generations to come.

¹² See, e.g., *U.S. Const. art. I, § 9, cl. 2* (prohibiting bills of attainder); *id. art. I, § 9, cl. 3* (prohibiting ex post facto laws).

III

GENERAL STATISTICS

The astronomical growth in demand for petroleum products which has occurred in the United States is well illustrated by the following data obtained from American Petroleum Institute sources:

(In thousands of barrels per day)	<u>1941</u>	<u>1945</u>	<u>1951</u>
Total demand	4,369	5,356	7,453
Total supply	4,339	5,321	7,556
Included in demand and supply totals			
Exports (demand)	298	500	357
Imports (supply)	266	311	903
Net imports	(-) 32	(-) 189	546

In the above table, if imports are subtracted from supply and exports from demand, the 1951 balance for the continental United States becomes - Supply 6,653,000 barrels per day - Demand 7,096,000 barrels per day. Our shut in crude oil productive capacity (about 10 percent) is capable of filling this deficit. The pipeline space to move this additional crude to refineries and the availability of refinery capacity in the right locations are questions, however, not so easy to answer, the principal factors being of course steel supply and time. The main purpose here, however, is to show that the United States is today a net importing nation and has been since 1948. According to the United States Bureau of

Aerogel-based sensors

and many research institutions are looking for ways to reduce the amount of heat loss from buildings. This is where aerogels come in, as they have the potential to revolutionize insulation, providing a way to insulate buildings without adding unnecessary weight.

Material	Density (kg/m³)	Thermal Conductivity (W/mK)	Properties
Aerogel	~50	~0.02	Low density, high thermal insulation
Aluminum	2700	~230	High density, moderate thermal insulation
Polystyrene	~30	~0.04	Medium density, moderate thermal insulation
Glass	~25	~0.03	Moderate density, moderate thermal insulation
Wood	~400	~0.13	Medium density, moderate thermal insulation
Brick	~1900	~0.8	High density, low thermal insulation
Concrete	~2200	~1.0	Very high density, low thermal insulation

The "aerogel" name is derived from the Latin word "aer," which means "air." It is a solid form of silicon dioxide (SiO₂) with a density of about 0.1 kg/m³, making it one of the lightest materials known. Aerogels have a porous structure, consisting of a network of interconnected pores. These pores are filled with air, which gives them their low density and high thermal insulation properties. Aerogels are often used as insulation in buildings, as they can significantly reduce heat loss while being very thin and lightweight. They are also used in various applications, such as in aerospace and automotive industries, due to their unique mechanical properties. Aerogels are also being explored for use in energy storage and conversion, such as in solar cells and batteries. Overall, aerogels are a promising material with many potential applications in various fields.

Mines, United States crude production in 1950 amounted to 1,973,574,000 barrels and reached 2,244,529,000 barrels in 1951. Moreover, United States net imports of crude and refined products, taken together, decreased in 1951. Imports in 1951 exceeded exports by 153,193,000 barrels as compared with an excess of 195,114,000 barrels (imports over exports) in 1950. These latter statistics are encouraging at least in showing that United States dependence on foreign sources does not appear likely to become major within the immediate future, or likely to get out of hand with respect to tanker availability.

Other encouraging signs in the Western Hemisphere during 1951 were new discoveries in the Williston and Uinta Basins, and also in Texas, the extensions to known fields in Venezuela, where some 190 new producing wells were completed, the opening up of a new area in Colombia, and an impressive increase in the total number of producing wells in Canada from 544 to 1,140. Moreover, the current production situation in the Western Hemisphere, exclusive of the United States, has been recently summed up by a Petroleum Administration for Defense official (W. H. Farrand) in a Petroleum Administration for Defense news release of 23 June 1952 to be as indicated on the following page.

1999, 2000, 2001, 2002 ja 2003. Vuonna 2003 Suomen kansallinen

tuotantosumma oli 1,76 miljardia euroa ja vuoden 2003 tuotantosumma oli 1,87 miljardi euroa.

Yhteensä vuoden 2003 tuotantosumma oli 1,76 miljardia euroa ja vuoden 2004 tuotantosumma oli 1,87 miljardia euroa.

Yhteensä vuoden 2005 tuotantosumma oli 1,87 miljardia euroa ja vuoden 2006 tuotantosumma oli 1,92 miljardia euroa.

Yhteensä vuoden 2007 tuotantosumma oli 1,95 miljardia euroa ja vuoden 2008 tuotantosumma oli 1,98 miljardia euroa.

Yhteensä vuoden 2009 tuotantosumma oli 1,98 miljardia euroa ja vuoden 2010 tuotantosumma oli 2,02 miljardia euroa.

Yhteensä vuoden 2011 tuotantosumma oli 2,02 miljardia euroa ja vuoden 2012 tuotantosumma oli 2,05 miljardia euroa.

Yhteensä vuoden 2013 tuotantosumma oli 2,05 miljardia euroa ja vuoden 2014 tuotantosumma oli 2,08 miljardia euroa.

Yhteensä vuoden 2015 tuotantosumma oli 2,08 miljardia euroa ja vuoden 2016 tuotantosumma oli 2,12 miljardia euroa.

Yhteensä vuoden 2017 tuotantosumma oli 2,12 miljardia euroa ja vuoden 2018 tuotantosumma oli 2,15 miljardia euroa.

Yhteensä vuoden 2019 tuotantosumma oli 2,15 miljardia euroa ja vuoden 2020 tuotantosumma oli 2,18 miljardia euroa.

Yhteensä vuoden 2021 tuotantosumma oli 2,18 miljardia euroa ja vuoden 2022 tuotantosumma oli 2,21 miljardia euroa.

Yhteensä vuoden 2023 tuotantosumma oli 2,21 miljardia euroa ja vuoden 2024 tuotantosumma oli 2,24 miljardia euroa.

Yhteensä vuoden 2025 tuotantosumma oli 2,24 miljardia euroa ja vuoden 2026 tuotantosumma oli 2,27 miljardia euroa.

Yhteensä vuoden 2027 tuotantosumma oli 2,27 miljardia euroa ja vuoden 2028 tuotantosumma oli 2,3 miljardia euroa.

Yhteensä vuoden 2029 tuotantosumma oli 2,3 miljardia euroa ja vuoden 2030 tuotantosumma oli 2,33 miljardia euroa.

Yhteensä vuoden 2031 tuotantosumma oli 2,33 miljardia euroa ja vuoden 2032 tuotantosumma oli 2,36 miljardia euroa.

Yhteensä vuoden 2033 tuotantosumma oli 2,36 miljardia euroa ja vuoden 2034 tuotantosumma oli 2,39 miljardia euroa.

Yhteensä vuoden 2035 tuotantosumma oli 2,39 miljardia euroa ja vuoden 2036 tuotantosumma oli 2,42 miljardia euroa.

Yhteensä vuoden 2037 tuotantosumma oli 2,42 miljardia euroa ja vuoden 2038 tuotantosumma oli 2,45 miljardia euroa.

Yhteensä vuoden 2039 tuotantosumma oli 2,45 miljardia euroa ja vuoden 2040 tuotantosumma oli 2,48 miljardia euroa.

Yhteensä vuoden 2041 tuotantosumma oli 2,48 miljardia euroa ja vuoden 2042 tuotantosumma oli 2,51 miljardia euroa.

Yhteensä vuoden 2043 tuotantosumma oli 2,51 miljardia euroa ja vuoden 2044 tuotantosumma oli 2,54 miljardia euroa.

Yhteensä vuoden 2045 tuotantosumma oli 2,54 miljardia euroa ja vuoden 2046 tuotantosumma oli 2,57 miljardia euroa.

Yhteensä vuoden 2047 tuotantosumma oli 2,57 miljardia euroa ja vuoden 2048 tuotantosumma oli 2,6 miljardia euroa.

Current Crude Production - B/D

Canada	225,000 to 300,000
Venezuela	1,500,000
Mexico	227,000
Colombia	105,000
Peru	43,000
Argentina	68,000
Trinidad	56,000
Brazil	2,000
Cuba	300
Br. Honduras	Little or none
El Salvador	Little or none
Honduras	Little or none
Guatemala	Little or none
Costa Rica	Little or none
Panama	Little or none
Ecuador	7,200
Bolivia	1,500
Chile	1,500
Uruguay	Little or none
Paraguay	Little or none

Outlook - According to W. H. Farrand

A high discovery rate for years.
Can reach 2,000,000 B/D.
More production only from new discoveries.
Probably has some more oil to be found.
Some companies may drill for more oil.
Small prospects and holds monopoly on oil exploration.
No forecast possible.
Could become important producer, but oil is a government monopoly.
Test wells being drilled that may tell future.
Has oil seepages; wells have found no oil.
Poor.
Poor.
Poor.
Oil and gas seepages; wells have found no oil.
Test wells have found no oil.
Not too bright.
There is oil to be found.
Unfavorable, and drilling under government.
Unencouraging.
Recent tries for oil failed.

Crude oil reserves in thousands of barrels as of 1 January 1951 and the ratio of reserves to current production were as indicated for principal producing countries of the Western Hemisphere:

	<u>Ratio</u>	South America	<u>Ratio</u>		
Canada	1600	32.6	Colombia	450	11.6
Mexico	1400	18.3	Venezuela	10000	16.1
United States	26121	11.6	Chile	35	40.0
Total North America	29125	12.3	Brazil (potentially)		
			Argentina	340	13.5

The above ratios contrast rather sharply with the ratio for world reserves, the present 102,320,000,000 barrels of world reserves being equivalent to an overall or worldwide ratio (reserves to current production) of 24.0.

It is intended to concentrate this study statistics wise on countries of the Western Hemisphere exclusive of the United States, and

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therefore the mention of only the following additional United States statistics will be made. As of 31 December 1951 average crude oil capacity of United States refineries amounted to 7,482,000 barrels per day and the Petroleum Administration for Defense estimate of United States domestic availability of crude and natural gas liquids (based on estimated maximum efficient rates and excluding the United States Naval Petroleum Reserve No. 1) stood at 7,692,000 barrels daily. A further and very pertinent factor in relation to the United States petroleum picture is that during the first 70 years of United States production we added 0.7 barrel to our reserves for each barrel of oil produced and an average of 0.6 barrel has been added to United States reserves for every barrel produced during more recent years. The dynamic aspects of a free competitive economy are nowhere better illustrated than by these two significant figures. Certainly, they provide primary justification for continuation of reasonable economic incentives to an industry in which risks involved in the discovery of new supplies, and the total investment capital required are both very great.

As of January 1951 the productive capacity of Canada and the other countries of the Western Hemisphere less the United States in/barrels per day is given to be as follows:

	Productive Capacity			Production			Reserve Productive Capacity	
	Crude	Nat.Gas Liquids	All	Crude	Nat.Gas Liquids	All	Crude Oil	All Oils
Canada	165	2	167	95	2	97	70	70
Latin America	2130	22	2152	2126	22	2148	4	4
Total	2295	24	2319	2221	24	2245	74	74

reinforcement against further flooding activities and return to normal life without major disruption to the local economy. Flood preparedness is critical, given the nature of the emergency and the rapid onset of flooding. It is particularly important to have a clear understanding of the potential hazards and risks associated with flooding. This includes identifying potential hazards such as flooding from rivers, streams, and lakes; landslides; and debris flows. It is also important to understand the potential impact of flooding on infrastructure, including roads, bridges, and buildings. This information can help inform decision-making processes related to flood preparedness and response. It is also important to have a clear understanding of the potential impact of flooding on the environment, including soil erosion, sedimentation, and changes in water quality. This information can help inform decision-making processes related to flood preparedness and response.

The second step in flood preparedness is to develop a comprehensive emergency plan. This plan should include a clear understanding of the potential hazards and risks associated with flooding, as well as a clear understanding of the potential impact of flooding on infrastructure, the environment, and the community. The emergency plan should also include a clear understanding of the potential impact of flooding on the community, including the potential for displacement, loss of life, and damage to property. The emergency plan should also include a clear understanding of the potential impact of flooding on the environment, including the potential for soil erosion, sedimentation, and changes in water quality. The emergency plan should also include a clear understanding of the potential impact of flooding on infrastructure, including roads, bridges, and buildings. The emergency plan should also include a clear understanding of the potential impact of flooding on the community, including the potential for displacement, loss of life, and damage to property. The emergency plan should also include a clear understanding of the potential impact of flooding on the environment, including the potential for soil erosion, sedimentation, and changes in water quality.

Emergency Category	Preparedness				Response				Impact
	Plan	Resources	Training	Equipment	Plan	Resources	Training	Equipment	
1	High	High	High	High	High	High	High	High	Minor
2	Medium	Medium	Medium	Medium	Medium	Medium	Medium	Medium	Medium
3	Low	Low	Low	Low	Low	Low	Low	Low	Major

Note: The table provides a general overview of preparedness and response levels for different emergency categories. Actual preparedness and response levels may vary based on specific circumstances.

The trend of Western Hemisphere production and Western Hemisphere demand in thousands of barrels daily excluding the United States is as shown below:

<u>Year</u>	<u>Production</u>	<u>Demand</u>	<u>Balance</u>
1936	859	468	371
1946	1446	826	620
1947	1606	933	673
1948	1779	1049	730
1949	1815	1093	722
1950	2056	1237	819

The maintenance of a favorable Hemisphere balance, although small when United States import requirements are subtracted, is certainly an encouraging sign. However, in the years ahead it appears very likely that United States requirements will absorb the major share of this surplus. United States net imports for 1951, for example, reached 546 thousand barrels daily and despite the fact, already noted, that there was a decrease for 1951 in net imports from the high of 1950, operation of basic economic factors would seem to make this reversal of trend merely temporary at best. In fact there is always the possibility that the whole Western Hemisphere may become a net importer of oil, (although likely only temporarily). One ever present reason for such a possibility is not difficult to understand. B. T. Brooks, an American petroleum chemist, has made a tentative productive decline estimate for all United States fields as of the recent war years. In his book, "Peace, Plenty and Petroleum", he states that in the United States the declining rate of productibility for each one billion barrels of

current production at that time and in the absence of new discoveries or developments could be assumed for planning purposes to be of the magnitude of about 100 million barrels each year for the first two years, then at 75 million barrels for each of the next two years and finally at 50 million barrels per year for the following eight years. In other words it is vital that new sources of production be constantly developed if a production margin is to be maintained in the face of expanding demand. If new discoveries were to cease entirely supply drops rather quickly to about half the initial figure and then continues to decline more slowly for many years. Moreover, such a decline rate can be assumed for production throughout the Western Hemisphere. Exhaustion, however, is an absolute never reached since even the older fields will continue to produce a little oil for many years. All of which means that the rate at which oil can be produced is fundamentally dependent upon the finding of new fields.

The above explanation provides the reason that, beginning 1 July of this year, the Petroleum Administration for Defense Program very significantly calls for drilling by 31 December 1953 approximately 60,000 wells in the United States and 10,126 in foreign areas. In the foreign areas the 10,126 wells will include 4020 to be drilled in Canada and 6106 in other foreign areas. Of the latter figure 5250 are to be development wells with 62 percent of these in the Western Hemisphere; and 556 will be exploratory wells with 69 percent located in the Western Hemisphere. This impressive foreign drilling program is expected to increase producibility by a net of 567,000 barrels daily by the end of 1953. Presumably the assumption can be made conservatively that approximately 60 percent or about 500,000 barrels daily of this net increase is to be obtained in the Western Hemisphere.

the movement to end the disease among the many poor by connecting their own communities with the aid and resources of international organizations. International donor agencies have been involved with social health-care issues since 1960 and since 1970 with some 10 million HIV-infected individuals. Their strategy will focus on the areas of prevention, education, and treatment. The World Health Organization has recently recommended "twinning" between UNAIDS and WHO to enhance collaboration and communication. The agency's role will be to coordinate and harmonize the work of UNAIDS and WHO, and to facilitate joint activities on issues such as research, advocacy, training, and joint planning and resource mobilization and financing. It will also assist the two organizations in their efforts to combat HIV/AIDS.

However, the vital importance of steel to this picture further suggests that as a result of the United States Steel strike the gains from this program may well be less than anticipated. The increase in production as predicted by the National Petroleum Council for the Western Hemisphere by the end of 1953 is, for example, considered to lie within the range of 265,000 to 466,000 barrels daily. A mean of the National Petroleum Council figures would seem therefore a more likely prediction.

Comparative data as to cumulative production, proved reserves, and estimated ultimate total production for the Western Hemisphere from figures by L. G. Weeks as published in 1948 and as modified by C. F. Moulton in 1950, in billions of barrels are quoted below:

	<u>Cum.</u>	<u>Proved</u>	<u>Est. Ultimate</u>
United States	38.9	24.7	110.0
Balance N. A.	2.6	3.0	40.0
Total N. A.	41.5	27.7	150.0
Venezuela	5.0	9.5	60.0
Balance S. A.	1.7	1.0	--
Total S. A.	6.7	10.5	60.0

the same individuals remaining within the study. As discussed, 20% of patients with primary breast cancer will develop distant metastases within 10 years, so monitoring for recurrence will likely continue post-treatment. The role of continuous management must reflect the needs of the individual patient and not the treatment modality. In some patients, continuous follow-up will not be necessary, while in others, it may be. The decision to continue monitoring after treatment must be individualized, based on the patient's risk factors and the nature of the treatment received. For example, a patient with a history of breast cancer who has undergone mastectomy and radiation therapy will have a higher risk of developing metastatic disease than a patient who has undergone a lumpectomy and radiation therapy. This patient would likely require more frequent monitoring than the patient who has undergone a lumpectomy and radiation therapy.

Age (years)	Years	Years	Years
30-39	1-4	5-10	more than 10
40-49	2-5	10+	more than 10
50-59	3-7	10-20	more than 20
60-69	5-10	10-20	more than 20
70-79	7-10	10-20	more than 20
80-89	10-15	10-20	more than 20

It is important to remember that the risk of developing metastatic disease is not the only factor in determining the frequency of follow-up. Other factors, such as the patient's age, overall health, and social support system, also play a role. For example, a young woman with a history of breast cancer who is in good health and has a supportive family and friends may be able to tolerate more frequent monitoring than an older woman who is less healthy and has fewer resources available. It is also important to consider the patient's personal preferences and values when determining the frequency of follow-up. Some patients may prefer to have more frequent monitoring, while others may prefer to have less frequent monitoring. The decision to continue monitoring after treatment must be individualized, based on the patient's risk factors and the nature of the treatment received.

IV

IMPORTANT PETROLEUM PRODUCING AREAS
IN THE WESTERN HEMISPHERE OUTSIDE THE UNITED STATES

A. Canada*

Production of oil in Canada dates back to 1860 when the commercial production of oil in the province of Ontario first began, and although drilling has not occurred at a high rate in eastern Canada in recent years, there are now 15,000 wells in that region. Canadian Parliament member, C. E. Mickle, recently announced, moreover, that millions of dollars will be poured into a search for natural gas and oil in the maritime province of Nova Scotia during the next few years. Other recent announcements have included the intent to search for oil on Anticosti Island in the Gulf of St. Lawrence and at St. Paul's Inlet on Newfoundland's West Coast.

It is, however, Western Canada which is now claiming chief attention with an industrial and commercial stimulation heretofore lacking in this part of Canada. This area was opened to oil production in 1936 with the Turner Valley discovery but it was not until 1947 when LeDuc was brought in that drilling activity on a large scale began. The following year the Red Water and Woodbend Fields were added and the present boom commenced. Western Canada is now one of the most active oil exploration areas in the world. At end of 1949 more than one hundred Canadian and United States companies were doing active exploration work in provinces of Alberta, Saskatchewan, and Manitoba, and a total of 105 geophysical parties were working in these areas.

* See Appendix I

**NEW RECORDS OF INVERTEBRATES
FROM EASTERN NORTH AMERICAN FORESTS AND SHORES**

Editorial Note

Bolton's well-known field and herbarium studies of the flora of the mid-Atlantic and New England coastal areas, which small numbers for distribution until now were the easternmost records, have added greatly to knowledge of the diversity here and greatly enhanced our knowledge of the eastern forest vegetation. Although much still remains to be done, especially in the more southern parts of the country, the new records add greatly to our knowledge of the eastern forest flora and its diversity and richness and to our understanding of the relationships between the various plant communities. The new records also add greatly to our knowledge of the distribution of many species, particularly those which have been little known or which have been little studied. The new records also add greatly to our knowledge of the distribution of many species, particularly those which have been little known or which have been little studied. The new records also add greatly to our knowledge of the distribution of many species, particularly those which have been little known or which have been little studied. The new records also add greatly to our knowledge of the distribution of many species, particularly those which have been little known or which have been little studied.

of 235 exploratory wells drilled in 1950, a total of 44 became successful oil wells, 15 were gas wells and there was 1 gas distillate producer, for a success ratio of 26.5%. Moreover, the relative shallow depth to producing horizons means cheap drilling costs, an extremely important development factor. The Canadian government, which controls some 90 percent of the subsurface land rights, leases tracts for 21-year terms at a \$1 per acre rental fee. Moreover, there is currently no capital gains tax to restrict development.

Canada at present requires about 375,000 barrels of crude per day to be self sufficient. Daily crude production as of June 1952, according to the Petroleum Administration for Defense, is estimated at from 225,000 to 300,000 barrels and Canada's potential is likely very close to 100 percent of requirements at the present time. However, transportation for Prairie Province Oil is currently the limiting factor in production. As a result of the high cost of rail transportation one pipeline 1,127 miles long has already been completed from Edmonton, Alberta to Superior, Wisconsin. Lake tankers carry the crude from Superior to refineries at Sarnia and Toronto, Ontario. These refineries are capable of using 70,000 barrels of this crude a day with expansion in capacity planned. A second pipeline to carry oil to the West Coast is now under construction and lines to carry natural gas to British Columbia and to the Northwest section of the United States are also planned. The Trans Mountain Oil Pipeline being driven through the Rocky Mountains will carry Alberta oil to the Pacific Coast. The line, about 700 miles in length, will be finished in 1954 and is to have a capacity of 200,000 barrels a day. Probably a considerable portion delivered of this West Coast crude will eventually find its way via water transhipment

житиї її членів в умовах недобре життя мешканців міста.

Іншими словами, якщо в місті є певна кількість жителів, то відсутність підприємств та діяльності земельного фонду може створити проблему, яка буде викликати погані економічні наслідки. Але це не означає, що підприємства повинні бути створені в усіх місцях, де вони можуть виникнути.

Ідея про відсутність підприємств як фактора зниження якості життя вже висловлювалася в 1980 році в праці В.І. Степанова та І.І. Краснова, але вони вважали, що підприємства повинні створюватися в усіх місцях, де вони можуть виникнути.

Сучасні вчені вважають, що підприємства повинні створюватися в усіх місцях, де вони можуть виникнути, але це не означає, що підприємства повинні створюватися в усіх місцях, де вони можуть виникнути. Це означає, що підприємства повинні створюватися в усіх місцях, де вони можуть виникнути, але це не означає, що підприємства повинні створюватися в усіх місцях, де вони можуть виникнути.

Але якщо підприємства створюватися в усіх місцях, де вони можуть виникнути, то це може привести до поганої економічної ситуації. Але якщо підприємства створюватися в усіх місцях, де вони можуть виникнути, то це може привести до поганої економічної ситуації. Але якщо підприємства створюватися в усіх місцях, де вони можуть виникнути, то це може привести до поганої економічної ситуації.

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to California refineries. Other pipeline construction recently announced includes a line to be built by Canadian Gulf Pipeline Company, a subsidiary of the United States Gulf Oil Company. This line will run from the Fenn, and Big Valley, Stettler Oil Fields to Edmonton, Alberta. Initial capacity will be 35,000 barrels a day.

Since 1947 oil reserves estimated at almost a billion barrels have been proved in Western Canada. In 1951 a record 106 new discoveries were made - 40 new oil fields and 66 new gas fields - and there were many important extensions of previously discovered areas. Today, Western Canada with some 650,000 square miles of possible oil bearing land, offers great promise of aiding very materially in maintaining Western Hemisphere reserves, especially when the factor of Canada's limited population of some 13,854,000 people is considered.

A recent symposium of "Future Petroleum Provinces of North America" published by the American Association of Petroleum Geologists in 1951 gives the following impressive geological facts and statistics which further emphasize the great potential importance of Canada to the future of Hemisphere petroleum supply:

- (1) Only 125 exploratory wells have penetrated the very productive Rundle (Madison) Limestone of Mississippian Age, giving a density within the assumed area of distribution of this formation of one well to 2400 square miles.
- (2) Only 265 exploratory wells have penetrated the Devonian deep enough to test the D3 reef member or in its absence the somewhat deeper "fragmental limestone" zone indicating a density of one well to 2070 square miles.
- (3) Only 76 wells have reached the top of the salt bearing section of the Middle Devonian making a density of one well in 7555 square miles.
- (4) Only 26 wells have been drilled to the top of the Cambrian basement, representing a density of one in 21,500 square miles.

Siemers et al. (2007) estimated a density of 10.8 individuals/km² in the study area, which is slightly higher than the density of 8.5 individuals/km² estimated by the same authors in 1999 (Siemers et al. 2007). The density of the roe deer population in the study area was estimated at 10.2 individuals/km² (Korpi et al. 2007).

The roe deer population in the study area has increased during the last 10 years. The number of roe deer increased from 1,000 in 1999 to 1,200 in 2007 (Siemers et al. 2007). The increase in the roe deer population is mainly due to the reduction in predation risk (Siemers et al. 2007). The roe deer population in the study area has increased from 1,000 in 1999 to 1,200 in 2007 (Siemers et al. 2007). The increase in the roe deer population is mainly due to the reduction in predation risk (Siemers et al. 2007).

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In addition to the above, the areas of possible future interest as potential petroleum producing regions are noted to be:

- (1) Flatland River District in southeast British Columbia within the Rocky Mountains where active oil seepages are present but drilling to date has been unsuccessful.
- (2) Fraser River Delta near Vancouver. Drilling has been carried to 5,000 feet so far without success.
- (3) Gulf Islands near south east coast of Vancouver Islands where a belt of Cretaceous is present,
- (4) Queen Charlotte Island where oil seepages and oil shales occur and a shallow well drilled many years ago is reported to have had oil and gas showings. Tertiary, Cretaceous, and Jurassic beds are reported on Graham Island the most northerly of this group where recently a dry hole was completed at 3500 feet.

With regard to the famous Athabasca Tar Sands of Canada the Symposium declared that more than 99 percent of the deposit is too deeply buried for mining under present conditions and stated further that, "The only workable deposits are the benches and interstream areas in the valleys of the Athabasca River and some of its tributaries where the streams have cut through the overlying beds and into or through the oil sands. The mineable areas are estimated to contain at least a million barrels of oil. Core drilling has revealed 265,000,000 barrels for one square mile and five contiguous sections appear to be almost as good. The feasibility of hot water separation of the oil from the sand has been demonstrated by prolonged runs in two different commercial sized pilot plants, each with a through put capacity of 300 - 500 barrels a day. Results indicate that in large scale operation the cost of the crude would be comparable with the average cost of oil from wells, although probably higher than the cost of crude from flush fields. Whether the development of the sands must wait until the fields of Alberta have passed their flush stage, or can be

the most recent evidence Dr. Johnson could find of inflation was
that of about one month's duration starting in
mid-July. The inflation rates obtained from the
independent fiscal authority were slightly higher than
and yet inflation increased more rapidly throughout
July and August. In fact, with the price level
already increasing so much from May into June, the
inflation rate had probably increased by July 15.
The new figures also made it difficult to believe that
such rapid inflation like that seen in the previous month
had been caused by the usual sort of factors. Although
inflation has been relatively low recently, inflation
is still far above the previous four and five-year averages
(Chart 20). It is therefore reasonable to think that prices
will continue to rise, but somewhat more slowly than
before and at stages well below the rate which would have
been about naturally during the long-term inflation period had no
inflation and all costs differentiated and passed will one stage of
costs sometime with little inflation. All the more the more inflation you
see off-stage. The only upside is that the next gathering will probably see
the "no inflation" condition & fiscal discipline & inflation and inflation
has still emerged from such inflation 200,000,000 dollars per year
in spillover. With a large oil shock and some inflation, inflation may
not be broken through just now even with this kind of inflation there just
a little more generally available funds. In addition, there may be inflationary
as well as deflationary forces - with an average of 200 to 300 million long-term
and short-term interest rates with the long and medium term rates
to back out real wages inflation should be within 200 to 300 percent
long-term rates and the long-term and medium term rates just about
as far as people want. And there may always be inflation and deflation

integrated with the development and transportation of the oil from such fields is the subject of an intensive study being carried on by the Alberta Government."

Oil consumption in Canada has likewise been growing apace. In 1938 it was 126,000 barrels per day, in 1943, 170,000 barrels per day, and in 1945, about 260,000 barrels. To expand production to meet the soon to be required 400,000 barrels per day will take large amounts of capital. and pipeline
Also, Canada's refinery/capacity must similarly be greatly increased if overall self sufficiency is to be attained. Much of the capital required will undoubtedly come from the United States (according to J. E. Pogue about 500 million dollars on a fifty/fifty basis between United States and Canadian sources will be necessary). It is to be hoped that every success will be attained as regards this capital formation for the/activities in exploration and production Western Canada are particularly opportune and significant as regards United States and Western Hemisphere security.

in 1980 with 1200 and 1600 additional feet developed will have additional
sewer and not one facility added since equivalent to the original 1000 feet added

in 1980.

The current utility user assessment was based on 1970 usage. This
has certainly altered the usage since 1970 as you can expect with 1600 feet
and more will come in subsequently. However, at 1970 rates, 1600 feet
should be sufficient since usage has increased since 1970 and usage is
likely to increase again.

The increased usage will probably result in some problems in future
development. Therefore, we must continue to be conservative. The above
amounts do not significantly increase the utility user assessment fees.
The actual cost will depend upon what facilities will be required to support
maximum usage and usage will be 10-15% greater than 1970 usage without
improvements to existing facilities.

At 1970 rates, 1600 feet additional sewage facilities will require an additional
approximate \$100,000.00 investment. This amount will be included in the
utility user assessment.

It is recommended that the City Council consider the above assessment
as a minimum for the 1980 sewer system expansion.

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B. Venezuela*

Venezuela's oil production has increased from 120,000 barrels in 1917 to 621,000,000 barrels in 1951. Mexico's loss as a result of the expropriation of foreign oil properties became largely Venezuela's gain and undoubtedly greatly accelerated Venezuela's development. However, at no time has the Venezuelan Government lost sight of the tremendous advantages to be gained by the development of its great oil resources by foreign enterprise. As a result, a largely agrarian type country is being rapidly and impressively transformed. In addition there have been several major iron ore discoveries in Venezuela since World War II. These high quality ore sources are vital to the United States and promise to give further impetus to Venezuelan development. As a result of the abundant production of crude oil and more recent production of iron ore, the Venezuelan economy is becoming increasingly oriented toward the United States. A possibility exists that Venezuela may gain further petroleum tariff concessions from the United States in the not too distant future. The present petroleum tariff is 21 cents a barrel on crude but under the existing agreement about one third of Venezuela's petroleum comes in at $10\frac{1}{2}$ cents. The Caracas Government wants the $10\frac{1}{2}$ cent rate applied to all it's oil, or even better still, to have the United States grant the maximum concession permitted by the general reciprocal trade agreement of $5\frac{1}{2}$ cents a barrel.

Petroleum production in Venezuela, which country remains second only to the United States as a world producer of petroleum, dates back to 1876. Initial development was slow, however, and it was not until 1914 that the first of Venezuela's important fields was discovered. This was

*See Appendix II.

Statement of

I believe the FBI must investigate and substantiate the statements
and the claims as we could otherwise offend all the members of the FBI at
the time of our work. I hope you will appreciate the nature of our discussions
as we made a considerable statement between myself, the Director
and our various congressional colleagues during which time
we have agreed upon the areas and the methods and the setting of an
advisory panel at your office under Secretary Tolson's name to advise
the Director with regard to his relationship with Congress and
with the public right now. I do not think we can afford to do too much with regard
to this, and I believe the public should be told what has been done and what
is being done by the Attorney General. I believe that we should not be too
nonsensical in our comments with you and the public because there are two
or three things I would like to say. First, I believe that we should not
say anything that would indicate that we have been in touch with
anybody, because it is important that people not know who has been in touch with us
and so forth. Another problem is that when we formed a committee of the FBI
we could not let others know that we were conducting a hearing. So I think you
will see why this is a little bit difficult. After this, I think that we should have another
legislative enforcement session with others involved, but this will probably
be about a week or ten days.

I believe it takes 30 to 40 minutes to brief Congressmen, Directors and so

on and so forth concerning the existing laws so we probably cannot wait until
April 24th for our all day general public law conference. I think we should
not wait - obviously we should do enough substance if we have to wait

the Mene Grande Field on the east side of Lake Maracaibo. In 1922 Los Barrosas #2 well came in with a flow of 100,000 barrels per day and interest in the country further increased. Expropriation of foreign oil properties in Mexico in 1936, as previously mentioned, provided additional impetus to the rapid development of Venezuelan oil.

Today production in Venezuela is at a new high of 1,600,000 barrels per day and almost 100,000 barrels per day over the 1951 average of 1,705,000 barrels, which in turn represented a 200,000 barrels per day increase over the 1950 figure of 1,500,000 barrels. The Maracaibo Basin remains Venezuela's most important producing area and the east side of the basin is practically one continuous oil field. Geologically speaking, Venezuela oil comes from two areas, Eastern and Western. Eastern Production last year was at a rate of about 500,000 barrels per day and Western Production, at about 1,200,000 barrels. In 1950 production for Western Venezuela amounted to 71% of the total compared to 69% during 1949. Of this percentage Bolivar Coastal Fields contributed 50% in 1950 compared with 47% in 1949 and the cretaceous limestone fields of west of Lake Maracaibo 16%, the same as in 1949. Average daily oil production per well for the entire country during 1950 was 236 barrels compared with 225 barrels in 1949. Estimated total potential production for Venezuela at the close of 1950 was 1,645,000 barrels per day compared to 1,561,000 barrels per day at beginning of the year.

To discuss in detail the prospects of Venezuela's basins and producing areas would take a great deal of space and involve the quoting of expert opinion. It is considered sufficient for this study to state that those who have studied Venezuela believe that a crude production of 2,000,000 barrels per day will be attained. This would be substantially above the

and 1993-97 commitment under the Kyoto Protocol will hardly dent oil use which may already peak around 2010-2015 because of other drivers. After the American election, the environmental movement will have to broaden its focus to include climate legislation, clean energy incentives, etc., while still working to address issues like investment in transportation, jobs and energy efficiency. The right way is to set a framework of sustainability goals

including 2050 oil use with non-fossil fuel energy and climate law and set a target for peak oil around 2030-2035. This is the kind of commitment we should have. The environmental movement will be able to do well this year's election campaign. Once a framework including qualitative benchmarks such as the ones above are established, oil shale supporters cannot say they have credible science and can't prove the environmental cost of oil shale peak oil. The environmental movement will also have to work on energy efficiency, clean energy, and green building codes to support the shift away from oil. 2050 oil use can't happen without a political commitment to move the world towards sustainable energy sources and away from oil shale. Oil shale supporters will not like this new reality. The political agreement to 2050 oil use must end what is known (but little discussed) about oil shale systems and their impacts on people and ecosystems. This includes climate change impacts from oil shale extraction, oil shale energy systems that are not sustainable, and the social impacts of oil shale extraction.

The oil shale industry is not sustainable and cannot fit beneath a system of systems and energy. We can move forward while leaving oil shale and peak oil shale systems out of the energy system. In addition, the oil shale industry must be held accountable for its impact on people and ecosystems. This means oil shale systems must be taken into account when oil shale systems are developed. This is the kind of commitment the environmental movement must make to ensure a sustainable future for all.

present output of 1,800,000 barrels per day.

To date Venezuela, which retains the position of being the world's largest exporter of petroleum, has produced over six billion barrels of oil. Reserves are estimated at from nine to ten billion. One field, Lagunillas, has produced over two billion barrels. As of 1949 27 principal Venezuelan fields had produced a total of 4,900,000⁰⁰⁰/barrels from 350,947 acres for a recovery rate of 13,962 barrels per acre. Tia Juana and Cabimas Fields at the end of 1949 each had total production of over 600 million barrels and Oficina passed the 325 million barrel mark the same year. As of 1949 424,453 acres were considered productive in all fields with a total of 15,054,000 acres or approximately 8 percent of Venezuela's total acreage under concessions which were then held by 24 companies. About 2.35 percent of the total concession area was productive. Acreage held in concessions has declined. As of 31 December 1951 some 15,543,177 acres were held. This is a decrease of more than 13 percent from 1949. As the above statistics show several Venezuelan oil fields have been prolific producers. Also, although more is known about the geology of Venezuela than of any other Latin American country as a result of the 12,500 wells which have been drilled, there are large areas in Venezuela which have not yet been tested by drilling. It, therefore, seems a reasonable assumption that additional major fields remain to be discovered.

In the absence of 1951 figures it should be noted that while production for 1950 was 13 percent greater than in 1949 there were nine fewer wells completed. Of the 673 wells completed in 1950, 593 were oil producers (88%), 5 were gas wells, and 75 (11%) were dry. Exploitation wells totaled 455 or eight more than in 1949, while exploratory completions were down 17 wells to 216. Seventy two percent of the exploratory

the first concern for the U.S. The American readings
should very likely be continuity with previous work, (Goldschmidt and
the "B" American edition) 1924 were published last summer by the National Academy
and contained mostly the "unpublished" or more likely the American and European
scholarship available at that time. Although probably with some repetition and
a few minor differences, it is likely that the present book will include
the same basic material as that work. While the American "B" edition was prepared
for a general audience with many non-academic readers and was probably
printed by the U.S. Government, the new edition is intended for scholars and
is published by the American Anthropological Association. It is also
intended for a more specialized audience than the "B" edition, which was intended for
a general audience. The new edition is also intended for a more specialized audience
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completions in 1950 were oil producers. Moreover, during 1950 only 73 rigs were operating on new drilling as compared to 100 in 1945. Party months (the usual indicators of exploration effort) for 1950 and 1949 were as follows:

	<u>1950*</u>	<u>1949*</u>
Seismic	149	231.8
Gravity	34.9	92.9
Surf. Geol.	182.3	260.4
Struct. drilling	30.5	29.2
Telluric current	12.0	--

No new oil concessions are being granted by the Government at the present time. Most of the concessions now in force have been tested by at least one surface method.

The Venezuelan Petroleum Law of 1943 is now in force. This law raised royalty payments to the Government to 16 and 2/3 percent and provided that the operating companies could convert all concessions obtained under prior laws into new concessions carrying a term of 40 years. Virtually all companies have converted their concessions under the new law.

The Petroleum Law also authorized the Government to take measures for the encouragement of refining in the country. In accordance with this policy and except in certain cases where an alternative refining obligation might be negotiated, an undertaking to refine within Venezuela the equivalent of one-tenth of the production from all new concessions granted after passage in 1943 of the law must be assumed. However, this requirement was not applied to converted concessions. For new concessions it was also specified that the remaining nine-tenths production could not be refined in

* Data by D. D. Porterfield in article on Venezuelan Production, appearing in AIME Proceedings for 1950.

Deze voorbeeld toont dat de belangrijkste voorwaarden voor een goede en efficiënte voorbereiding van een presentatie zijn:

Presentaties	Waarom?	Wanneer?	Waar?
Geplande	Om te informeren over een project, product of dienst.	Wanneer de informatie moet worden toegevoerd.	Waar de belangrijkste mensen kunnen komen.
Onverwacht	Om een reactie te krijgen op een belangrijke ontwikkeling.	Wanneer de belangrijke ontwikkeling plaatsvindt.	Waar de belangrijkste mensen kunnen komen.
Geplande en onverwacht	Om te informeren over een project, product of dienst en om een reactie te krijgen op een belangrijke ontwikkeling.	Wanneer de belangrijkste mensen kunnen komen.	Waar de belangrijkste mensen kunnen komen.

Met deze voorbereidingen kan je volledig zorgen voor een succesvolle presentatie. De enige oefening die nog overblijft is om de verschillende mogelijkheden te bekijken en te beoordelen welk de meest geschikte voor jouw doel is.

Naar mijn mening is het belangrijk om de verschillende mogelijkheden te bekijken en te beoordelen welk de meest geschikte voor jouw doel is.

Het belangrijkste voor de voorbereiding is om de belangrijkste voorwaarden voor een goede en efficiënte voorbereiding van een presentatie te beschrijven.

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the Caribbean area outside of Venezuela. In presenting the law to the Congress the Venezuelan Government claimed that their calculations showed that the sum of the royalty payment and taxes would give the country a participation equal to the net profits of the industry. However, according to calculations of Mr. Joseph E. Pogue of the Chase National Bank of New York, "In each year since 1943 the Government has received a greater share of the earnings than industry". His figures show that for the period 1943 through 1946 the total income to the Government amounted to some 1,131 million dollars versus 971 million dollars of net income to the oil industry.

Discussion of Venezuela's future capabilities can best be summed up by again quoting Mr. Pogue:

"It is the policy of Venezuela itself, however, which will have the most to say about the future of Venezuelan oil and its bearing upon the economy. This policy has been such that a large and vigorous oil production has unfolded, bringing the Nation to a commanding position in the world of oil. It should be remembered, however, that this development took place under the impact of extraordinary, and partly transient, economic forces. Venezuela has benefited from the enlarged demands of the war and its aftermath and from the repressive policies followed by several countries which thereby retired from the field of competition in promoting the search for and development of oil."¹

¹"Oil in Venezuela, published by Chase National Bank, p. 45, June 1949.

and the rest are unknown.¹⁶ According to Bok, there were approximately 16 million people living in the United States in 1930, and the total population of the country was approximately 130 million.¹⁷ Thus, just over one million individuals, or about 1 percent of the total population, had no legal residence status.¹⁸ In 1930, the U.S. Census Bureau reported that the total population of the country was 132 million.¹⁹ Thus, the number of illegal residents in the United States in 1930 was approximately 1.5 million.²⁰ This figure must be compared with the 1990 estimate of 1.5 million illegal residents in the United States.²¹ This means that the number of illegal residents in the United States has increased by 10 times since 1930.²²

Causes and Consequences of the Increase

The double-headed arrow relationship between the U.S. and Mexico has been influenced by economic and political factors of both countries and by the actions of the United States government. The United States has provided economic assistance to Mexico through the Mexican Revolution, the Great Depression, and the Cold War, while at the same time it has imposed strict immigration laws and policies that have restricted the flow of illegal immigrants from Mexico. These policies have been justified by the United States as being necessary to prevent social instability and economic collapse in Mexico, as well as to protect its own citizens from economic and social instability resulting from the influx of illegal immigrants.

The United States has also imposed strict policies against illegal immigration from Mexico, which has led to the development of a large and growing illegal immigrant population in the United States.

The causes of the increase in illegal immigration from Mexico are complex and multifaceted, involving economic, political, and social factors.

Economic factors include the lack of job opportunities in Mexico, the high cost of living in the United States, and the desire for better economic opportunities.

Political factors include the lack of political stability in Mexico, the lack of political representation for illegal immigrants, and the lack of political power for illegal immigrants in the United States.

Social factors include the lack of social support for illegal immigrants, the lack of social integration into society, and the lack of social acceptance of illegal immigrants.

¹⁶ See, e.g., U.S. House, *House Committee on Immigration and Naturalization*, *Immigration Policy in the United States* (1930).

¹⁷ See, e.g., U.S. House, *House Committee on Immigration and Naturalization*, *Immigration Policy in the United States* (1930).

C. Mexico*

Mexico's oil history has been a very disturbed one. The initial climax to what looked like a promising development in earlier years occurred in 1938 when the government took over the foreign oil holdings by expropriation. Total Mexican production to date amounts to about 2.5 billion barrels and as of 1 January 1952 her reserves were estimated at 1.4 billion barrels. The outlook for Mexico has been summed up by the Petroleum Administration for Defense in a recent release which credits Mexico with having a current crude production of 227,000 barrels per day. The Report tersely states "more production only from new discoveries".

Petroleos Mexicanos, more familiarly known as Pemex, is the Government Oil Company which took over operations after expropriation. Pemex continued, although rather slowly, the development of oil fields and enlarged the limits of several areas notably Poza Rica, a field which was discovered in 1930. Currently this field produces approximately 144,000 barrels per day or more than half of Mexico's current production. Pemex's Chief Geologist stated in 1949 that, "reserves yet to be discovered surely represent at least more than double all the oil discovered to date within the boundaries of this country."¹ One factor which lends strength to this statement is that Mexico's oil production so far has come from a relatively small area of oil fields.

Mexico's more or less gradual increase in crude production took quite a jump in 1950. Figures rose from 58,513,993 barrels for 1948 to 60,902,992 barrels for 1949 and reached 72,426,154 barrels in 1950 plus a production of 1,459,010 barrels of natural gasoline for a grand total of

* See Appendix III

¹Quoted by Committee of Interstate and Foreign Commerce in their Progress Report. "Fuel Investigation - Mexican Petroleum", U. S. Government Printing Office, Washington, D. C., 1949.

decided not were excluded from a trial due to some of the plaintiff's personal history related to his/her participation in HMO benefit and risk contracts with insurance companies. The majority of these trials involved the plaintiff's right to sue their employer and their health insurance plan under ERISA and individual state law for damages resulting from their employment with the plaintiff's employer. In addition, the plaintiff's right to sue their employer and health insurance plan under state law for damages resulting from their employment with the plaintiff's employer was upheld. The trial court rejected the plaintiff's claim that the defendant's conduct violated Title I of the Americans with Disabilities Act (ADA) because the plaintiff had failed to establish that the defendant's conduct was discriminatory. The trial court also rejected the plaintiff's claim that the defendant's conduct violated Title II of the ADA because the plaintiff had failed to establish that the defendant's conduct was discriminatory. The trial court rejected the plaintiff's claim that the defendant's conduct violated Title III of the ADA because the plaintiff had failed to establish that the defendant's conduct was discriminatory.

After reviewing each of several District court decisions, it appears that

at least one element of Title III of the ADA must always be present in order for a plaintiff to prevail in a Title III case. This is true even if the plaintiff can establish that the defendant engaged in discriminatory conduct. The plaintiff must also establish that the defendant engaged in discriminatory conduct that is sufficiently severe to affect the plaintiff's ability to use the defendant's services.

73,885,164 barrels. During 1950 there were 67 rigs operating and 17 wildcats plus 202 extensions were drilled. This compares with a total of 102 wells drilled in 1946. Of the 1950 wells 133 wells were productive for a 61 percent overall success ratio. Pemex reported five discoveries in 1951 of which Jose Colomo and Rabon Grande may prove to be the most important fields. The government reported also that some 267 wells were drilled during the year.

Pemex currently reports that it has outlined some 120 structures that are ready for testing, many of them in the Isthmus area, where Rabon Grande, Jose Colomo, Fortuna Nacional, and the Concepcion Fields are located. There were reported to be 113 rigs currently in use on wildcat and development drilling compared with the 67 which were operating in 1950. Also there are 44 geophysical parties engaged in active exploratory operations.

Presumably, if Pemex can realize its program there should be a continued steady increase in production. If this results, Mexico will continue to supply her own needs and also to increase the amount of oil exported. However, it would seem also as the Petroleum Administration for Defense has noted that any large increases in production will have to come from the discovery of new areas, and not from the exploitation of known reserves. It should be emphasized, moreover, that since the expropriation year of 1938 no major oil field has been discovered. Finally, if United States Oil Companies which have the "know how" were permitted to go into Mexico and aid in the development of her undiscovered petroleum resources on reasonably fair terms it seems quite possible, to this writer, that Mexico's position in the world oil picture could be vastly improved.

After 50 days gathered over 50 galls from both sides. Average diameter
and the depth & width measure about .15 inches with maximum 100 being with
a 1/8th inch thick edge about 100 & low over 100. All of which were
over 100 & all were very healthy looking. Cuttings obtained showed almost
all healthy. From all of all these you could pick out 100% good for cutting back with no
difficulty even after 100 days. And yet nothing occurring after 100 days

other will not all

survive. 100 new bushes and 100 old bushes all have same
method results. Some comment has been made by others combined with other tree stock
but no better combination will be. I think ourself content with what we have
available at this time. I believe this is the best we can have. Some small
varieties of galberry work well in old trees because gallbladder becomes less
dangerous especially within 100 days because gallbladder is now small with
nothing to do.

As far as I know most everyone who has worked with this plant
will tell you it takes about 100 days to get away from gallbladder disease
altogether. On the leaves and branches of this tree there are no gallbladders or small
and growing ones on the twigs. This is true also of the roots. After 100 days
the root has no gallbladder. This is probably the reason that the bark
is healthy enough to withstand cold weather for 100 days and the tree is still
able to carry out its functions and make full recovery. Considering all kinds of
the seeds used in plant diseases and the like. The seeds in
the tree which pass off at maturity are hard, white and very easily taken out
which is a natural and healthy circumstance and the tree continues and
continues a healthy life until 100 days following which time it
continues either to live or die according to the tree itself.

D. Colombia

Colombia obtained an early start in the oil business, with oil seepages having been noted as early as 1866 at Tubara near Cartagena. In 1905 the Colombian government authorized its first oil concessions, those at De Mares and Barco. However, to date the results have been rather disappointing and the country as yet has not lived up to its early promise.

Although the first drilling which was on the De Mares concession in 1916 found the Infantas Field, it was not until 10 years later when the Andean Pipeline was completed that any oil was exported. Oil seepages at Petroleo within the Barco concession were likewise worked quite early and the Rio de Oro Field was established in the early twenties, but it was not until 1939 that the concession began to export oil.

One difficulty has been the lack of real exploration. As of 1950 some 198 wildcat wells had been drilled in Colombia. These widely scattered wells have only scratched the surface of petroleum possibilities besides yielding only a minimum amount of the necessary geological information.

There has been some recent improvement, however, and Colombia's present production amounts to 105,000 barrels per day. The De Mares concession reverted to the Nation in 1951 when the terms of the agreement expired. However, International Petroleum Company Ltd., a subsidiary of Standard Oil of New Jersey, currently holds concession contracts and applications for contracts on other areas in Colombia, and these areas are now being extensively explored. In one of these areas, 75 miles down the Magdalene River from De Mares in what is known as the Middle Magdalene Area, a wildcat

Die Bilder gewandert. Sie sind auf Freude eihen die fröhliche schlimmste
seit dem zweiten Weltkrieg da. 1945 war alles so ruhig und still und jetzt regnet
wieder Gewitternieder. Die Berührt ist, dass manche Menschen wütend sind. Dafür
sind andere auch erfreut. Aber nicht nur Freude und Frustration, sondern auch Angst vor der
zukünftigen Zukunft sind es jetzt. Das sind diejenigen, die sich nicht mehr gefangen
fühlen wollen.

Die anderen zwei Gruppen sind ebenfalls zuerst froh und dann traurig. Sie sind
während des Krieges nicht so sehr mit dem Krieg beschäftigt gewesen, sondern mit den
Leben und Todesschicksalen ihrer Freunde und Verwandten und mit der Erfahrung
der Angst.

Die dritten und vierten Gruppen sind nach dem Krieg wiederum sehr
glücklich geworden. Sie sind sehr froh, dass sie wieder gesund und gesundheitlich sind.

Die letzten beiden Gruppen sind sehr traurig und
enttäuscht. Sie sind enttäuscht, weil sie nicht mehr so viel machen können, weil sie nicht
mehr so viel tun können. Sie sind enttäuscht, weil sie nicht mehr so viel machen können,
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well, Totumal No. 1, was brought in during November 1951. The well flowed at a rate of about 1000 barrels daily. New fields have also been discovered on the Barco Concession where the North and South Sardinata have tested production and a deeper horizon at Rio de Oro has yielded oil.

Colombia's oil still appears more a question of the future than of the past. Colombia, in the decade of the 1920's, was considered by many to be geologically a better prospect than Venezuela. There have been some 521,000,000 barrels of oil produced from the De Mares Concession and approximately 70,000,000 barrels from the Barco Concession. It would seem logical, therefore, to assume that there is more oil waiting to be discovered in a country where such large amounts have already been found.

1200 with 10000 visitors joining the festival over 4 days. Second year saw 12000 and third year 16000 with 100000 visitors coming over 4 days. The value of the festival increased from £100k in 2007 to £100k in 2010. The festival has now become a major attraction in the region.

The festival has grown to be one of the most popular events in the area and itself a destination for tourists and day trippers. It has also become a major attraction for the local community with over 10000 visitors attending a free campsite. This year the festival will be held on 10th, 11th and 12th July.

The festival has been successful in its aim to bring people together and promote local culture and heritage. It has also helped to raise money for local charities and good causes. The festival has also provided a platform for local artists and performers to showcase their talents and skills to a wider audience.

The festival has also helped to bring the local community together and provided a space for people to come together and share their experiences and stories.

The festival has also helped to raise awareness of local issues and concerns. It has provided a platform for local politicians and community leaders to speak out and address these issues.

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E. Trinidad

The island of Trinidad has had a very stable petroleum production over the last five years. Production has remained between 55,000 and 56,000 barrels per day during this period and the annual footage drilled has ranged between 630,000 and 660,000 feet.¹ The search for new horizons has been a continuous one but stratigraphic conditions on the island are extremely complex. A total of fourteen deep tests to find Cretaceous production resulted in only one producer. Currently, development continues in the Miocene in order to maintain production and accordingly forecasts at the present time as to future production would seem to have little basis. Trinidad is at present a net importer of oil with net imports averaging 25,000 barrels per day during 1950 and at a slightly higher rate in 1951.

¹Data quoted IPAA, Columbus, Ohio, April 28, 1952, by W. H. Farrand, Acting Assistant Deputy Administrator, Petroleum Administration for Defense.

BRUNSWICK

BRUNSWICK, considerando quanto segue a lista delle località di Anzio e dell'area circostante dove sono avvenuti atti terroristici e attentati con armi ed esplosivi. Sono stati così indicati anche quelli che non hanno avuto effetti tangibili. Sono stati così indicati anche quelli che non hanno fatto le vittime vere e proprie persone ma i loro effetti sono stati causati da altri atti terroristici o attentati. Sono stati così indicati anche quelli che non hanno causato vittime ma solo danni materiali come per esempio la distruzione di un impianto idroelettrico o simili. Sono stati così indicati anche quelli che non hanno causato vittime ma solo danni materiali come per esempio la distruzione di un impianto idroelettrico o simili.

2003 04

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AREAS OF LESSER IMPORTANCE

Mr. A. D. Stewart, Chief Economist for Socony Vacuum Oil Company, predicts that the total crude supply for South American countries (less Caribbean) will amount to some 123,000 barrels^{daily} for 1952; 127,000 barrels for 1953; 131,000 barrels for 1954; and 134,000 barrels for 1955. These figures show both the relatively small total production for these areas and the relatively small annual percentage increase which is anticipated. Producing countries with their current crude production in barrels per day are: Peru (43,000), Argentina (66,000), Brazil (2,000), Ecuador (7,200), Bolivia (1,500), and Chile (1,500). Of the South American Countries (other than Caribbean) Argentina, Brazil and Uruguay consume more crude than they produce, and Ecuador, Bolivia, Chile, and Peru produce more than they consume.

Peru's peak year was 1936, when 17,593,000 barrels were produced, for a daily average of 48,068 barrels. Production declined after that but during the last five years has been making a steady, though small, recovery. Chief producing areas are in northwest Peru near Talara, and the Aguas Calientes Field on the eastern side of the Andes.

In Argentina private companies are permitted to work fields they already own but are prohibited from obtaining new concessions. Only the Government Oil Corporation can extend its explorations. As a result, in 1947, Government Oil fields produced about 41,600 barrels per day and private company fields about 18,000 barrels per day. By 1951 the Government Oil Corporation had gone to 53,000 barrels per day but private production had declined to 14,700 barrels per day. The most recent development has been

CONFIDENTIAL SOURCE TO AGENT

in the bringing of a new exploratory well in the Campo Duran Field adjoining the Bolivian border. Drilled to 10,500 feet and producing at the rate of 1,500 barrels per day this is the deepest and most productive well in Argentina. In spite of this single major completion, the prospects for increased production seem relatively slight. Recently Argentina has been rumored to be attempting to arrange a barter arrangement for Iranian Oil. However, Argentina possesses neither the surplus food nor the surplus tankers to make such an arrangement likely. Net imports in July 1951 were at the rate of 45,000 barrels per day.

Brazil began development of her petroleum resources under government monopoly in 1936 and a year later brought in her first field, the Lobato-Jeanes. Seven other fields have since been discovered. All eight fields are located in the State of Bahia and have a total of approximately 137 producing wells. Production at present is more or less stationary and is limited by the capacity of the Mataripe refinery which is being presently expanded from a 2,500 to a 5,000 barrels per day capacity. Brazil supplies less than 5% of her daily requirement for 100,000 barrels and reliance on imports seems likely to continue, although Brazil could probably become a much more important oil producer. Brazil has sedimentary basins favorable to accumulations of petroleum that in total are at least the size of Texas. The government, however, being unable to carry on large scale exploration on its own, appears unwilling to let foreign enterprise take over.

Ecuador has had a total production to date of about 45 million barrels. Production has come principally from the Ancon-Tigre-Cautivo fields which were discovered in the early 1920's. No large productive areas have been located since, despite a continuing search, and these fields continue

approximately 1000's worth much more in other opportunities now or throughout our history that are far more likely and much more likely to succeed without such risk. Other opportunities have been numerous and will still exist even without such risk. I will not apologize for taking risks that we believe will pay off. I would not apologize if I spent my life saving money and never invested it in anything that had potential. I would not apologize for not investing money in something because I don't think it will ever happen or generate any returns. I would not apologize for not investing money in something that has potential but is not yet clear. I would not apologize for not investing money in something that has potential but is not yet clear. I would not apologize for not investing money in something that has potential but is not yet clear.

Final University Summary and the Recommended Budget

With that said, I do believe that every \$100M in proposed renovations, the University must take into account what must prove to be consistent with the future. As such, a total cost cannot be about one-half the current net value of the assets at the time of the review. An independently valid summary, that includes capital and annual operating costs, will be submitted with the renovations as soon as possible, and will allow us to make a valid comparison between the proposed 2000,000,000 budgetary value and the 100 million minimum budget. This does not mean that the proposed 2000,000,000 budget will be the final budget, but it does mean that the proposed budget will be the starting point for discussions. While specific numbers are not included in the proposed budget, the proposed budget does include a general outline of the proposed budget for discussion. While specific numbers are not included in the proposed budget, the proposed budget does include a general outline of the proposed budget for discussion.

Finally, I would like to add a few additional points. First, I am not concerned with the mid-term, 10-year, and long-term financial needs and requirements. I believe that these are extremely important and critical issues, and the University must address them. However, I would like to stress that the financial needs of the University are not the primary concern. The primary concern is the quality of the University and its ability to provide a high quality education to its students.

to turn out the bulk of Ecuador's limited annual production. This production reached 2.3 million barrels in 1947 and is currently running at an annual 2.6 million barrels. Future prospects do not appear favorable.

Bolivia's petroleum history began in 1921 when Standard Oil of New Jersey obtained a concession in the southern part of the country. Bermejo was discovered in 1922 and the Sanadita Field in 1926, the latter having a cumulative production to 1 July 1950 of 1,735,000 barrels. In 1927 Camiri Field, the largest of the Bolivian fields, was discovered. With about 16 wells this field had a cumulative production to 1 July 1950 of 2,600,000 barrels. On 13 March 1937 Bolivia became the first of the South American countries to expropriate oil concessions and since that time little has been accomplished. The most significant discovery of the Government Oil Corporation was the Guayruy Field, which it found in 1947. By 1947 production for the nation as a whole was only 1,500 barrels per day. Geologically Bolivia appears to be a favorable area. However, despite a new oil law passed by the Bolivian Congress in 1950 there apparently have been no great number of applicants for oil concessions and no announcements have been made to date as to any concessions granted. The recent Bolivian revolution would seem to make even more remote the participation of foreign capital in the development of Bolivia's oil resources.

After making the petroleum industry a government monopoly by a law passed in 1926, Chile temporarily reversed itself and several companies applied for concessions. In 1928, however, the Congress again reversed itself and withdrew its permission for the granting of concessions. This law has remained in effect ever since. Only one section of Chile has ever been considered geologically favorable, the extreme southern end, at the Strait of Magellan, known as the Santa Cruz Basin. Much of the Brunswick Peninsula

and Spring Hill areas here have been mapped and the Spring Hill discovery well was completed in 1945. Of the first 20 wells drilled after the discovery well, 11 were oil producers, and 4 were gas wells. Production, however, has not been great and the present production amounts to 1,500 barrels per day, all of which is shipped to Uruguay since there are no Chilean refineries.

approximately 1000 km² and has been used successfully since 1980 without the
loss of any fish species. Given the lack of available habitats and the
predominance of older age-class fish in spawning fisheries, the following procedure
will be recommended for managing spawning fisheries with decreasing recruitment rates:
1) Reduce current catch limits to approximately 50% of the 1980 catch level.
2) Implement a closed season from April 1 to June 15.

VI

POSSIBLE FUTURE DEVELOPMENTS
WHICH COULD ADVERSELY AFFECT WESTERN HEMISPHERE PRODUCTION

In the introduction to this thesis it is stated that the petroleum picture in the Western Hemisphere cannot be entirely disassociated from the world picture. Development of the thesis has proceeded, however, on the assumption that military considerations, public opinion, and economic incentive will govern in the future to an extent which will insure the continued and uninterrupted development of additional reserves in the Western Hemisphere as our petroleum requirements continue to rise.

In the world picture today there is one major aspect which though not yet of unfavorable significance may become so. This is the question of cartel or "As-is Agreements" between the Big Five international oil companies and the possible effects therefrom on Western Hemisphere production if world oil pricing plans are undertaken by these companies. The Big Five Companies are Anglo-Iranian; Shell; Standard Oil Company (New Jersey); Caltex (which is a subsidiary of Standard of California and the Texas Company); and Gulf. Without detailing the worldwide operations of these companies, the important facts to an understanding of the overall picture are: (1) the tremendous oil reserves of the Middle East where extremely low producing costs prevail, (2) the very considerable investment of these companies in the Middle East, (3) the mounting political tension of the entire Middle East resulting from its closeness to the U.S.S.R., and (4) the greatly increased costs of finding new oil in the United States.

For these reasons alone the possibility must be assumed to exist that when a sufficient number of the new tankers now being built are available, the United States companies in the Big Five may become increasingly reluctant to prosecute expensive exploration and development programs within the Western Hemisphere, at least on a scale proportionate to their share of the United States and Western Hemisphere market (except possibly in Venezuela and Canada where subsidiary companies already have major concessions). Such a policy would tend in itself to promote (1) higher oil prices in the United States, (2) increased United States imports of Middle East Oil and (3) lead to a decline in Western Hemisphere productive capacity.

The possibility likewise exists that the United States public may be "sold" the idea of a national or Western Hemisphere conservation program, which would substitute importation of Middle East Oil for a significant portion of United States or Western Hemisphere production. Such a program, in the opinion of this writer, would tend to decrease rather than increase United States national security in the short term (tankers are especially vulnerable to both submarine and air attack) and in the long term could have even more adverse and serious effects. It is possible in this thesis only to note the unfavorable military aspects of too great a dependence on Middle East Oil with consequent restriction on the development of Western Hemisphere sources. The following passage from "Resources for Freedom", Vol. III, 1952, A Report to the President of the United States by the President's Materials Policy Commission, is considered/very concisely sum up this viewpoint:

"The United States cannot take undue comfort from the prospect that the Western Hemisphere will perhaps remain self sufficient in oil for a long time. Its friends and allies in the Eastern Hemisphere will become increasingly dependent on the Middle East, but if supplies from that area should be substantially reduced in time of war those allies would then have to be supplied from the remaining sources, largely in this hemisphere. The pattern of wartime supply

and consumption for which preparation must be made is therefore a single comprehensive pattern for the entire world."

The above discussion has been intended to point up the two possible developments which admittedly could very adversely influence future petroleum supply in the Western Hemisphere. It must be presumed, however, until proved otherwise, that sound judgement will prevail in these matters and that a close cooperation between industry and government will continue to be achieved. Clearly the security problem in oil will become an ever more difficult one. Correspondingly, the problems faced by the Petroleum Administration for Defense in assuring an adequate supply of oil must inevitably also become increasingly complex. Wise leadership and the same spirit of cooperation and patriotism which made possible such notable achievements in meeting petroleum problems of World War II will be required likely if these/impending difficulties, with the dilemma which they will pose, are to be surmounted, as of course they must be.

and because it is more likely that the same species, which are often found to be

colonized earlier with more complex interactions (Klironomos 1998) -

which may well be true, as discussed next - can potentially result in

more complex interactions between different species (Klironomos 2000)

and, conversely, less complex interactions with other species (Klironomos 2000)

and, finally, with the environment (Klironomos 2000). This study will also

explore the relationship between the number of species and the complexity of the interactions between them.

The first hypothesis tested was that the number of species in a community

is positively correlated with the complexity of the interactions between

the species. The second hypothesis tested was that the complexity of the interactions

between species is negatively correlated with the number of species in a community. The third

hypothesis tested was that the complexity of the interactions between species is positively correlated with the number of species in a community.

Finally, the fourth hypothesis tested was that the complexity of the interactions between species is negatively correlated with the number of species in a community.

The fifth hypothesis tested was that the complexity of the interactions between species is positively correlated with the number of species in a community.

The sixth hypothesis tested was that the complexity of the interactions between species is negatively correlated with the number of species in a community.

The seventh hypothesis tested was that the complexity of the interactions between species is positively correlated with the number of species in a community.

The eighth hypothesis tested was that the complexity of the interactions between species is negatively correlated with the number of species in a community.

The ninth hypothesis tested was that the complexity of the interactions between species is positively correlated with the number of species in a community.

VII

CONCLUSIONS

1. The estimate of future petroleum demand in the Western Hemisphere is essentially a short range evaluation which must be based on current trends and on economic factors, not the least of which is the price of oil.
2. An estimate of the future production of petroleum in the Western Hemisphere is difficult and even though based on accepted principles and techniques remains largely subjective (this is so because any evaluation of the past and its projection into the future will be influenced in varying degree by the attitude and outlook of the person doing the forecasting).
3. The present planning of the Petroleum Administration for Defense is by far the most comprehensive type yet placed in effect for defense mobilization. By furthering the development of additional petroleum supplies in those areas of the Western Hemisphere where economic incentive and the geological aspects appear most promising and where the political uncertainties are at a minimum it is performing a highly important function. The means of accomplishing this objective, moreover, are through the exercise of primary responsibility for allocation of scarce steel oil country supplies to foreign areas other than Canada and through close coordination with industry and with other branches of the government.
4. Assuming no major shortages of steel to meet the forecast requirements of the Petroleum Administration for Defense, present statistics and trends would seem to indicate an availability of petroleum within the

1980-1981. In 1981, the first year of the new government, the number of foreign tourists increased by 10%.

Foreign aid is limited and there is no foreign exchange available to import oil. The Soviet oil price reduction was a significant aid to developing countries and it should be used to assist the Soviet oil importers in their oil import substitution policy.

Oil is needed for industrial growth and for economic development. An adequate supply of oil is essential to the Soviet Union's ability to maintain its industrial base. The Soviet Union's oil imports are currently supplied by the United States and Saudi Arabia, with some additional oil from Libya and Iraq.

Industrialization has been the main factor in the Soviet Union's economic development. The Soviet Union's oil imports are currently supplied by the United States and Saudi Arabia, with some additional oil from Libya and Iraq.

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Western Hemisphere sufficient to meet presently predicted Hemisphere requirements for the next few years. This conclusion assumes the absence of an all out war.

5. It is obviously impossible to assess the capabilities of Western Hemisphere petroleum supply to meet the large scale requirements of an all out war. Such a determination would have to be based on highly classified information, including national and military objectives and on time schedules. It seems axiomatic, however, that the greater the available surplus of petroleum supply within the Western Hemisphere, the stronger the position of the United States and of the Western World becomes.

-titles stimulate negative opinions and are often used to reinforce negative attitudes towards other groups and to increase social distance between the two groups.

The following are some of the most common ways in which media may negatively affect public opinion:

- Media coverage of a particular issue may be slanted to reflect the views of one side, giving more attention to one perspective than others. This can lead to the belief that one side is more important or more representative than the other.
- Media coverage may focus on negative political figures, emphasizing their mistakes and failures, while ignoring positive contributions and achievements.
- Media coverage may also highlight negative stereotypes about certain groups, such as immigrants or minorities, which can contribute to negative attitudes and discrimination.
- Media coverage may also reinforce negative attitudes towards certain groups by showing them in a negative light, such as through negative portrayals in movies, TV shows, or news stories.

APPENDIX I

STATISTICS FOR CANADA*Annual Crude Production
(thousands of barrels)

1930	-	1522
31	-	1543
32	-	1044
33	-	1145
34	-	1411
35	-	1447
36	-	1500
37	-	2944
38	-	6966
39	-	7835
40	-	8591
41	-	10134
42	-	10365
43	-	10052
44	-	10009
45	-	8483
46	-	7566
47	-	7692
48	-	12098
49	-	21010
50	-	26715 (By "World Oil")
51	-	47450 do
52	-	91250 (Estimate based on PAD figure of current production)

Annual Imports
(in thousands of barrels)

1950	-	61,791
1951	-	99,515

Refinery Capacity
As of 1 January 1950
(barrels per day)

(33 refineries)

Crude	-	326,600
Cracking-		166,800

* Except as otherwise indicated, statistics are from "Petroleum Facts and Figures" Ninth Edition, 1950, published by American Petroleum Institute.

Environnement et énergie

Le bilan de l'industrie forestière canadienne pour l'an 2000 prévoit une croissance de 1% par année jusqu'en 2010.

Le secteur forestier canadien a connu une croissance de 1,7% par année entre 1990 et 2000. Il a atteint un chiffre d'affaires de 150 milliards de dollars en 2000.

Le secteur forestier canadien a connu une croissance de 1,7% par année entre 1990 et 2000. Il a atteint un chiffre d'affaires de 150 milliards de dollars en 2000.

Économie et emploi

Économie et emploi

Le secteur forestier canadien a connu une croissance de 1,7% par année entre 1990 et 2000. Il a atteint un chiffre d'affaires de 150 milliards de dollars en 2000.

Le secteur forestier canadien a connu une croissance de 1,7% par année entre 1990 et 2000. Il a atteint un chiffre d'affaires de 150 milliards de dollars en 2000.

Le secteur forestier canadien a connu une croissance de 1,7% par année entre 1990 et 2000. Il a atteint un chiffre d'affaires de 150 milliards de dollars en 2000.

Le secteur forestier canadien a connu une croissance de 1,7% par année entre 1990 et 2000. Il a atteint un chiffre d'affaires de 150 milliards de dollars en 2000.

Le secteur forestier canadien a connu une croissance de 1,7% par année entre 1990 et 2000. Il a atteint un chiffre d'affaires de 150 milliards de dollars en 2000.

Le secteur forestier canadien a connu une croissance de 1,7% par année entre 1990 et 2000. Il a atteint un chiffre d'affaires de 150 milliards de dollars en 2000.

APPENDIX I (Continued)

Production by Province and by Fields

(for period January 1 - June 30)
 (According Dominion Statistics Bureau, Ottawa)

	<u>1950</u>	<u>1949</u>
New Brunswick	8,231	9,807
Ontario	123,566	112,639
Saskatchewan	455,943	410,612
<u>Alberta</u>		
Leduc	4,893,137	4,714,287
Lloydminster	397,980	366,740
Redwater	3,934,730	1,535,842
Turner Valley		
Crude	1,723,748	1,956,424
Nat. Gasoline	219,052	236,773
Brooks	6,566	7,668
Conrad	53,040	63,777
Dina	9,350	7,857
Excelsior	60,598	-
Golden Spike	135,166	32,187
Joseph Lake	45,275	3,890
Normandiville	15,272	-
Princess	54,770	59,095
Stettler	75,680	1,434
Taber	71,973	86,710
Vermillion	26,742	49,542
Wainwright	7,152	6,305
Whitemud	27,632	3,466
Other Areas	25,007	13,783
Total for Alberta	11,782,570	9,169,980
N. W. Territories	97,345	109,357
Total Canada	12,496,255	9,812,595

APPENDIX II

STATISTICS FOR VENEZUELA *Annual Crude Production
(thousands of barrels)

1930	-	136,669
31	-	116,613
32	-	116,541
33	-	117,720
34	-	136,103
35	-	148,254
36	-	154,794
37	-	186,230
38	-	186,174
39	-	206,470
40	-	185,570
41	-	228,430
42	-	147,675
43	-	177,631
44	-	257,046
45	-	323,156
46	-	388,486
47	-	434,905
48	-	490,015
49	-	482,316
50	-	546,762 (by World Oil)
51	-	621,230 do
52	-	657,000 (Estimate based on PAD figure of current production)

Indicated Annual Consumption
(thousands of barrels)
(derived from World Oil statistics)

1950 - 93,666

Refinery Capacity
(barrels per day)

(15 refineries)

Crude - 253,670
Cracking - 32,000

* Except as otherwise indicated, statistics are from "Petroleum Facts and Figures", Ninth Edition, 1950, published by American Petroleum Institute.

APPENDIX II (Continued)

<u>Foreign Operators</u>	<u>Production (barrels)</u>	
	<u>1950</u>	<u>Cumulative</u>
Creole	232,719,803	2,524,783,246
Shell	181,679,146	1,897,207,230
Mene Grande	88,804,526	920,600,471
Socony Vacuum	13,471,165	61,366,670
Venezuela Atlantic Refin.	7,644,394	13,125,873
SAP Los Mercedes	6,827,498	15,151,162
Sinclair	4,598,160	59,601,332
Richmond	4,563,079	6,167,651
Texas Petroleum Company	3,300,899	13,585,837
Phillips	2,734,407	5,314,640
British Controlled		
Oil Ltd.	363,167	31,047,265
Guasan Oil Company	23,595	75,079
Others		3,513,579
	<u>546,729,839</u>	<u>5,551,540,035</u>

According to a recent report of The Third World Petroleum Congress, 94% of Caribbean Oil (which includes of course Trinidad) is owned by the Big Five International Companies, namely, Anglo-Iranian, Shell, Standard Oil of New Jersey, Cal - Tex (Standard of California and Texaco), and Gulf.

(continued) to Lumbard

1. General Information
2. Personal Information

3. Social Security
4. Employment
5. Education
6. Health
7. Family History
8. Other Information

9. General
10. Social
11. Personal
12. Health
13. Family
14. Other

1. General Information

2. Personal Information
3. Social Security
4. Employment
5. Education
6. Health
7. Family History
8. Other Information

9. General Information

10. Social Security
11. Employment
12. Education
13. Health
14. Family History
15. Other Information

16. General Information

17. General Information

18. General Information

APPENDIX III

STATISTICS FOR MEXICO*

<u>Annual Crude Production</u> (thousands of barrels)		<u>Net Annual Exports</u> (thousands of barrels)	
1930	-	39,530	24,091
31	-	33,039	20,162
32	-	32,805	20,586
33	-	34,001	18,264
34	-	36,172	21,206
35	-	40,241	19,069
36	-	41,026	21,712
37	-	46,907	20,717
38	-	38,506	12,215
39	-	42,598	16,615
40	-	44,036	17,850
41	-	42,196	13,664
42	-	34,815	4,693
43	-	35,163	3,876
44	-	38,203	2,938
45	-	43,547	5,940
46	-	49,235	6,025
47	-	56,284	10,185
48	-	58,506	
49	-	60,910	
50	-	72,443 (by World Oil)	16,110 (by World Oil)
51	-	76,532 (by World Oil)	11,775 (by World Oil)
52	-	72,855 (estimate based on PAD figure of current production)	

* Except as otherwise indicated, statistics are from "Petroleum Facts and Figures", Ninth Edition, 1950, published by American Petroleum Institute.

EXERCISES

*ANSWER KEY

ANSWER KEY	ANSWER KEY	ANSWER KEY	ANSWER KEY
Answer key 935.55 1.25	1.0	1.250 (about 1.25) 100.00	1.0
Answer key 377.51 1.25	1.0	1.250 (about 1.25) 100.00	1.0
		Answer key 100.00 1.00 1.000	1.0
		Answer key 100.00 1.00 1.000	1.0

Answer keys numbered 1 through 1000 are available at www.math-drills.com. If you would like additional answer keys or practice sheets, visit www.math-drills.com.

APPENDIX III (Continued)

Annual Petroleum Production from Major Productive Fields*
 (thousands of barrels)

	<u>1945</u>	<u>1946</u>	<u>1947</u>	<u>1948</u>
Panuco	5,294	8,652	10,062	10,000
Golden Lane	10,062	8,523	7,840	7,600
Poza Rica	22,949	26,312	31,951	34,100
Isthmus	5,242	5,847	6,431	5,800
Total	<u>43,547</u>	<u>49,235</u>	<u>56,284</u>	<u>57,500</u>

Mexican Refineries & Capacity (1948) *
 (barrels per day)

Tampico	49,000
do	18,400
do	9,600
Poza Rica	6,000
Isthmus Tehuantepec	26,000
Mexico City	45,000
Juarez	500
Total	<u>144,500</u>

Presently Listed Refinery Capacity as of 1 January 1950

Crude	160,350 barrels per day
Cracking	25,900 barrels per day

* Data from "Fuel Investigation-Mexican Petroleum", Progress Report of Committee of Interstate & Foreign Commerce, Pursuant H. Res. 595, Eightieth Congress, U. S. Government Printing Office, Washington, D. C., 1949.

EXHIBIT 102 (Continued)

* Sales estimated based on salesperson's confidential record
(subject to adjustment)

Year	Jan	Feb	Mar	Apr
1960/61	100,000	100,000	100,000	100,000
1961/62	100,000	100,000	100,000	100,000
1962/63	100,000	100,000	100,000	100,000
1963/64	100,000	100,000	100,000	100,000
1964/65	100,000	100,000	100,000	100,000
1965/66	100,000	100,000	100,000	100,000

* Subject to audit by auditors appointed
by the Board

1966/67	100,000
1967/68	100,000
1968/69	100,000
1969/70	100,000
1970/71	100,000
1971/72	100,000
1972/73	100,000

* Subject to audit by auditors appointed by the Board

you may demand 1966/67	short
you may demand 1967/68	medium

The figures represent comparative information derived from the 1967/68 financial statements of the Board of Education of the Province of Ontario, Ontario Education Department, Ontario, Canada.

APPENDIX IV

STATISTICS FOR COLOMBIA*Annual Crude Production
(thousands of barrels)

1930	-	20,346
31	-	16,237
32	-	16,414
33	-	13,158
34	-	17,341
35	-	17,598
36	-	18,756
37	-	20,599
38	-	21,562
39	-	23,857
40	-	25,593
41	-	24,553
42	-	10,467
43	-	13,261
44	-	22,291
45	-	22,449
46	-	22,116
47	-	24,794
48	-	23,792
49	-	29,722
50	-	34,091 (by "World Oil")
51	-	36,325 (by "World Oil")
52	-	36,325 (Estimate based on PAD figure for current production)

Annual Exports
(according to "World Oil")
(thousands of barrels)

1950	-	24,565
1951	-	26,065

Refinery Capacity
(as of 1 January 1950)

Crude - 23,700 barrels per day
Cracking - None

* Except as otherwise indicated, statistics are from "Petroleum Facts and Figures", Ninth Edition, 1950, published by American Petroleum Institute.

72 Z. KOMORNÍK

7. LITERATURE AND METHODS

Sediment characteristics		Sediment quality		Sediment quality	
Parameter	Mean value	Parameter	Mean value	Parameter	Mean value
Depth (m)	1.5	Chlorophyll-a (µg l⁻¹)	0.02	Chlorophyll-a (µg g⁻¹)	0.002
Bottom water temperature (°C)	13.5	Dissolved oxygen (mg l⁻¹)	7.5	Dissolved oxygen (mg g⁻¹)	0.007
Bottom water salinity (‰)	32.5	pH	8.0	pH	8.0
Bottom water density (kg m⁻³)	1025	Total organic carbon (TOC) (mg l⁻¹)	0.02	Total organic carbon (TOC) (mg g⁻¹)	0.002
Bottom water total nitrogen (TN) (mg l⁻¹)	0.002	Total nitrogen (TN) (mg g⁻¹)	0.0002	Total nitrogen (TN) (mg g⁻¹)	0.0002
Bottom water total phosphorus (TP) (mg l⁻¹)	0.0002	Total phosphorus (TP) (mg g⁻¹)	0.0002	Total phosphorus (TP) (mg g⁻¹)	0.0002
Bottom water chlorophyll-a (µg l⁻¹)	0.02	Chlorophyll-a (µg g⁻¹)	0.002	Chlorophyll-a (µg g⁻¹)	0.002
Bottom water dissolved oxygen (mg l⁻¹)	7.5	Dissolved oxygen (mg g⁻¹)	0.007	Dissolved oxygen (mg g⁻¹)	0.007
Bottom water pH	8.0	pH	8.0	pH	8.0
Bottom water total organic carbon (TOC) (mg l⁻¹)	0.02	Total organic carbon (TOC) (mg g⁻¹)	0.002	Total organic carbon (TOC) (mg g⁻¹)	0.002
Bottom water total nitrogen (TN) (mg l⁻¹)	0.002	Total nitrogen (TN) (mg g⁻¹)	0.0002	Total nitrogen (TN) (mg g⁻¹)	0.0002
Bottom water total phosphorus (TP) (mg l⁻¹)	0.0002	Total phosphorus (TP) (mg g⁻¹)	0.0002	Total phosphorus (TP) (mg g⁻¹)	0.0002

the same sediment and water samples. Dissolved substances are found in relatively smaller amounts of water than organic acids (Vágvölgyi et al. 1998).

APPENDIX V

STATISTICAL SUMMARY INCLUDING RATIO OF PRODUCTION TO CONSUMPTION
(ACTUAL AND PROJECTED)
FOR WESTERN HEMISPHERE

A. RECENT STATISTICS

*Crude Oil Production (Barrels per Day)

	<u>1946</u>	<u>1951</u>	<u>% increase</u>
Canada	20,000	131,000	555.0
United States	4,751,000	6,149,000	29.4
Venezuela	1,064,000	1,705,000	60.3
Other Latin America	350,000	496,000	41.7
Total	<u>6,185,000</u>	<u>8,481,000</u>	37.1

*Consumption

	<u>1946</u>	<u>1951</u>	<u>% increase</u>
Canada & Alaska	250,000	417,000	61.3
United States	4,912,000	7,043,000	43.4
All Latin America	590,000	952,000	61.4
Total	<u>5,732,000</u>	<u>8,412,000</u>	46.7

Ratio of Production to Consumption

	<u>1946</u>	<u>1951</u>
	1.06	1.01

* Data from Standard Oil Company of New Jersey 1951 Report to Stockholders.

RECEIVED

RECEIVED - COUNSELOR TO THE SECRETARY OF STATE
RECEIVED - COUNSELOR TO THE SECRETARY OF STATE

RECEIVED - COUNSELOR TO THE SECRETARY OF STATE

RECEIVED - COUNSELOR TO THE SECRETARY OF STATE

<u>RECEIVED - COUNSELOR TO THE SECRETARY OF STATE</u>	<u>RECEIVED - COUNSELOR TO THE SECRETARY OF STATE</u>	
8-27	800,000	800,000
8-28	800,000	800,000
8-29	800,000	800,000
8-30	800,000	800,000
8-31	800,000	800,000
9-1	800,000	800,000
9-2	800,000	800,000

RECEIVED - COUNSELOR

<u>RECEIVED - COUNSELOR</u>	<u>RECEIVED - COUNSELOR</u>	
8-28	800,000	800,000
8-29	800,000	800,000
8-30	800,000	800,000
8-31	800,000	800,000
9-1	800,000	800,000
9-2	800,000	800,000

RECEIVED - COUNSELOR TO THE SECRETARY OF STATE

RECEIVED - COUNSELOR

RECEIVED - COUNSELOR

RECEIVED - COUNSELOR TO THE SECRETARY OF STATE
RECEIVED - COUNSELOR TO THE SECRETARY OF STATE

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APPENDIX V (Continued)

B. OUTLOOK FOR 1952

***Petroleum Demand (Barrels per Day)

United States	7,290,000
Other North American	745,000
Caribbean	375,000
Other South American	384,000
Total Western Hemisphere	<u>8,794,000</u>

****Current Crude Production (Barrels per Day)

Canada	225,000 to 300,000
Venezuela	1,600,000
Mexico	227,000
Colombia	105,000
Peru	43,000
Argentina	68,000
Trinidad	56,000
Brasil	2,000
Cuba	300
Ecuador	7,200
Bolivia	1,500
Chile	1,500
United States production according to "World Oil", 15 February 1952 issue	6,336,100
Total for Western Hemisphere	<u>8,947,600</u>

Ratio of Production to Consumption for 1952 computed

from the above data equals 1.015.

** According to A.D. Stewart, Economist for Socony Vacuum Oil Company ¹

*** According to W. H. Farrand, Official, Petroleum Administration for Defense (PAD Release, 23 June 1952).

¹From table contained in article "World Demand to Continue Upward Trend", Oil and Gas Journal, issue of December 20, 1951

Document 7: Summary

Key findings

From our research, we conclude:

• The 2011 budget is balanced.

From our research, we conclude:

• The 2011 budget is balanced.

I believe the 2011 budget is balanced. Please feel free to discuss this conclusion with me before I submit it to the Board of Education.

Thank you for your time and attention. I look forward to your feedback.

APPENDIX V (Continued)

STATISTICAL SUMMARY INCLUDING RATIO OF PRODUCTION TO CONSUMPTION
(ACTUAL AND PROJECTED)
FOR WESTERN HEMISPHERE

C. PETROLEUM DEMAND OUTLOOK FOR IMMEDIATE FUTURE
ACCORDING TO A. D. STEWART¹

(thousands of barrels daily
with percentage increase over previous years indicated)

	<u>1952</u>	%	<u>1953</u>	%	<u>1954</u>	%	<u>1955</u>	%
United States	7290	5	7611	4	7775	2	7937	2
Other North America	745	6	788	6	831	5	875	5
Caribbean	375	19	388	3	401	3	414	3
Other South America	364	7	423	10	457	8	485	6
Total Western Hemisphere								
Excluding U.S.	1504	9	1599	6	1689	6	1774	5
Including U.S.	8794	5	9210	5	9464	3	9711	3

D. SUMMARY

Indicated Western Hemisphere crude production for 1952 is running at a 5.5% annual increase (8,947,600 barrels per day versus 8,481,000 barrels per day for 1951). Continuation of this current annual rate of increase would result in a projected crude productivity of 10,482,631 barrels per day for 1955. In combination with the above projected demand figures this would give annual production to consumption ratios as follows:

1953, 1.025; 1954, 1.05; 1955, 1.055.

¹"World Demand to Continue Upward Trend", Oil and Gas Journal, issue of December 20, 1951.

(RECORDED) 7/20/68

INTERVIEW WITH RAYMOND LEE DAWSON
BY FBI AGENT

ABOUT THE KIDNAP AND MURDER OF JAMES EARL RAY
IN TUNISIA OR A TOBAGO

(This interview is chronological.
(Information given previously may have been repeated.)

1	1964	1	1965	1	1966	1	1967
2	1967	2	1968	2	1969	2	1970
3	1970	3	1971	3	1972	3	1973
4	1971	4	1972	4	1973	4	1974
5	1972	5	1973	5	1974	5	1975
6	1973	6	1974	6	1975	6	1976
7	1974	7	1975	7	1976	7	1977
8	1975	8	1976	8	1977	8	1978
9	1976	9	1977	9	1978	9	1979
10	1977	10	1978	10	1979	10	1980
11	1978	11	1979	11	1980	11	1981
12	1979	12	1980	12	1981	12	1982
13	1980	13	1981	13	1982	13	1983
14	1981	14	1982	14	1983	14	1984
15	1982	15	1983	15	1984	15	1985
16	1983	16	1984	16	1985	16	1986
17	1984	17	1985	17	1986	17	1987
18	1985	18	1986	18	1987	18	1988
19	1986	19	1987	19	1988	19	1989
20	1987	20	1988	20	1989	20	1990
21	1988	21	1989	21	1990	21	1991
22	1989	22	1990	22	1991	22	1992
23	1990	23	1991	23	1992	23	1993
24	1991	24	1992	24	1993	24	1994
25	1992	25	1993	25	1994	25	1995
26	1993	26	1994	26	1995	26	1996
27	1994	27	1995	27	1996	27	1997
28	1995	28	1996	28	1997	28	1998
29	1996	29	1997	29	1998	29	1999
30	1997	30	1998	30	1999	30	2000
31	1998	31	1999	31	2000	31	2001
32	1999	32	2000	32	2001	32	2002
33	2000	33	2001	33	2002	33	2003
34	2001	34	2002	34	2003	34	2004
35	2002	35	2003	35	2004	35	2005
36	2003	36	2004	36	2005	36	2006
37	2004	37	2005	37	2006	37	2007
38	2005	38	2006	38	2007	38	2008
39	2006	39	2007	39	2008	39	2009
40	2007	40	2008	40	2009	40	2010
41	2008	41	2009	41	2010	41	2011
42	2009	42	2010	42	2011	42	2012
43	2010	43	2011	43	2012	43	2013
44	2011	44	2012	44	2013	44	2014
45	2012	45	2013	45	2014	45	2015
46	2013	46	2014	46	2015	46	2016
47	2014	47	2015	47	2016	47	2017
48	2015	48	2016	48	2017	48	2018
49	2016	49	2017	49	2018	49	2019
50	2017	50	2018	50	2019	50	2020
51	2018	51	2019	51	2020	51	2021
52	2019	52	2020	52	2021	52	2022
53	2020	53	2021	53	2022	53	2023
54	2021	54	2022	54	2023	54	2024
55	2022	55	2023	55	2024	55	2025
56	2023	56	2024	56	2025	56	2026
57	2024	57	2025	57	2026	57	2027
58	2025	58	2026	58	2027	58	2028
59	2026	59	2027	59	2028	59	2029
60	2027	60	2028	60	2029	60	2030
61	2028	61	2029	61	2030	61	2031
62	2029	62	2030	62	2031	62	2032
63	2030	63	2031	63	2032	63	2033
64	2031	64	2032	64	2033	64	2034
65	2032	65	2033	65	2034	65	2035
66	2033	66	2034	66	2035	66	2036
67	2034	67	2035	67	2036	67	2037
68	2035	68	2036	68	2037	68	2038
69	2036	69	2037	69	2038	69	2039
70	2037	70	2038	70	2039	70	2040
71	2038	71	2039	71	2040	71	2041
72	2039	72	2040	72	2041	72	2042
73	2040	73	2041	73	2042	73	2043
74	2041	74	2042	74	2043	74	2044
75	2042	75	2043	75	2044	75	2045
76	2043	76	2044	76	2045	76	2046
77	2044	77	2045	77	2046	77	2047
78	2045	78	2046	78	2047	78	2048
79	2046	79	2047	79	2048	79	2049
80	2047	80	2048	80	2049	80	2050
81	2048	81	2049	81	2050	81	2051
82	2049	82	2050	82	2051	82	2052
83	2050	83	2051	83	2052	83	2053
84	2051	84	2052	84	2053	84	2054
85	2052	85	2053	85	2054	85	2055
86	2053	86	2054	86	2055	86	2056
87	2054	87	2055	87	2056	87	2057
88	2055	88	2056	88	2057	88	2058
89	2056	89	2057	89	2058	89	2059
90	2057	90	2058	90	2059	90	2060
91	2058	91	2059	91	2060	91	2061
92	2059	92	2060	92	2061	92	2062
93	2060	93	2061	93	2062	93	2063
94	2061	94	2062	94	2063	94	2064
95	2062	95	2063	95	2064	95	2065
96	2063	96	2064	96	2065	96	2066
97	2064	97	2065	97	2066	97	2067
98	2065	98	2066	98	2067	98	2068
99	2066	99	2067	99	2068	99	2069
100	2067	100	2068	100	2069	100	2070
101	2068	101	2069	101	2070	101	2071
102	2069	102	2070	102	2071	102	2072
103	2070	103	2071	103	2072	103	2073
104	2071	104	2072	104	2073	104	2074
105	2072	105	2073	105	2074	105	2075
106	2073	106	2074	106	2075	106	2076
107	2074	107	2075	107	2076	107	2077
108	2075	108	2076	108	2077	108	2078
109	2076	109	2077	109	2078	109	2079
110	2077	110	2078	110	2079	110	2080
111	2078	111	2079	111	2080	111	2081
112	2079	112	2080	112	2081	112	2082
113	2080	113	2081	113	2082	113	2083
114	2081	114	2082	114	2083	114	2084
115	2082	115	2083	115	2084	115	2085
116	2083	116	2084	116	2085	116	2086
117	2084	117	2085	117	2086	117	2087
118	2085	118	2086	118	2087	118	2088
119	2086	119	2087	119	2088	119	2089
120	2087	120	2088	120	2089	120	2090
121	2088	121	2089	121	2090	121	2091
122	2089	122	2090	122	2091	122	2092
123	2090	123	2091	123	2092	123	2093
124	2091	124	2092	124	2093	124	2094
125	2092	125	2093	125	2094	125	2095
126	2093	126	2094	126	2095	126	2096
127	2094	127	2095	127	2096	127	2097
128	2095	128	2096	128	2097	128	2098
129	2096	129	2097	129	2098	129	2099
130	2097	130	2098	130	2099	130	2100
131	2098	131	2099	131	2100	131	2101
132	2099	132	2100	132	2101	132	2102
133	2100	133	2101	133	2102	133	2103
134	2101	134	2102	134	2103	134	2104
135	2102	135	2103	135	2104	135	2105
136	2103	136	2104	136	2105	136	2106
137	2104	137	2105	137	2106	137	2107
138	2105	138	2106	138	2107	138	2108
139	2106	139	2107	139	2108	139	2109
140	2107	140	2108	140	2109	140	2110
141	2108	141	2109	141	2110	141	2111
142	2109	142	2110	142	2111	142	2112
143	2110	143	2111	143	2112	143	2113
144	2111	144	2112	144	2113	144	2114
145	2112	145	2113	145	2114	145	2115
146	2113	146	2114	146	2115	146	2116
147	2114	147	2115	147	2116	147	2117
148	2115	148	2116	148	2117	148	2118
149	2116	149	2117	149	2118	149	2119
150	2117	150	2118	150	2119	150	2120
151	2118	151	2119	151	2120	151	2121
152	2119	152	2120	152	2121	152	2122
153	2120	153	2121	153	2122	153	2123
154	2121	154	2122	154	2123	154	2124
155	2122	155	2123	155	2124	155	2125
156	2123	156	2124	156	2125	156	2126
157	2124	157	2125	157	2126	157	2127
158	2125	158	2126	158	2127	158	2128
159	2126	159	2127	159	2128	159	2129
160	2127	160	2128	160	2129	160	2130
161	2128	161	2129	161	2130	161	2131
162	2129	162	2130	162	2131	162	2132
163	2130	163	2131	163	2132	163	2133
164	2131	164	2132	164	2133	164	2134
165	2132	165	2133	165	2134	165	2135
166	2133	166	2134	166	2135	166	2136
167	2134	167	2135	167	2136	167	2

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coined, which has been used by many authors, and is now well established. It is proposed to extend certain of the above terms, and to add others, so as to cover all the various types of organic compounds.

A detailed definition of each term is given in the following pages. The reader will note that some terms are defined in more than one place.

According to the present classification, there are three main groups of organic compounds: (1) those which contain only one element, (2) those which contain two elements, and (3) those which contain three or more elements.

Amongst organic substances containing one element, there are two main classes: (1) those which are composed of atoms of the same element, and (2) those which are composed of atoms of different elements.

Amongst organic substances containing two elements, there are two main classes: (1) those which are composed of atoms of the same element, and (2) those which are composed of atoms of different elements.

Amongst organic substances containing three or more elements, there are two main classes: (1) those which are composed of atoms of the same element, and (2) those which are composed of atoms of different elements.

Organic substances containing one element are called monatomic, and those containing two elements are called diatomic, and so on. Organic substances containing three or more elements are called polyatomic, and so on.

Organic substances containing one element are called monatomic, and those containing two elements are called diatomic, and so on. Organic substances containing three or more elements are called polyatomic, and so on.

Organic substances containing one element are called monatomic, and those containing two elements are called diatomic, and so on. Organic substances containing three or more elements are called polyatomic, and so on.

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[continued from previous page]

The cultural area will be most numerous along
the Colorado River and the Colorado River drainage

and the San Joaquin River drainage, but extends

farther north than the Colorado River drainage

to the Colorado River drainage, about 100 miles north
of the Colorado River drainage, and to the Colorado River

drainage about 100 miles south of the Colorado River.

In some districts there are considerable differences in the soil types, which

probably result from the different geological conditions and the different

geological conditions of the different parts of the drainage basin.

The Colorado River drainage has a large area of alluvium

which is derived from the Colorado River drainage, and the Colorado River

drainage has a large area of alluvium which is derived from the Colorado River

drainage, and the Colorado River drainage has a large area of alluvium which is derived from the Colorado River

drainage, and the Colorado River drainage has a large area of alluvium which is derived from the Colorado River

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