

OIL AND GAS ENERGY RESOURCES  
OF MONTANA

GUSTAV STOLZ, JR.

JULY 15, 1974

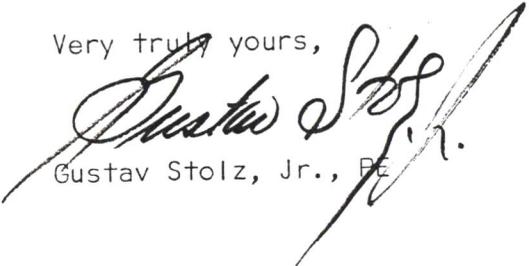
106 Rocky Mountain Lane  
Butte, Montana 59701  
July 15, 1974

Mr. John Reuss, Executive Director  
State of Montana  
Environmental Quality Council  
Capitol Station  
Helena, Montana 59601

Dear Mr. Reuss:

Transmitted herewith are three copies of my  
report entitled, "Oil and Gas Energy Resources Of Montana,"  
in accordance with our March 11, 1974 agreement.

Very truly yours,

  
Gustav Stolz, Jr., PE

GS,Jr.:bm

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## INTRODUCTION

Montana's Energy Policy Study was initiated by the Environmental Quality Council at the direction of the 1973 legislature through Senate Joint Resolution 24.

The stated purpose of the study was "to obtain a comprehensive energy policy, together with recommendations for necessary implementing legislation, to insure a reliable and adequate supply in a manner consonant with the preservation of environmental values and the prudent use of the State's air, land, water and energy resources."

This report constitutes that portion of the overall energy policy study dealing with Montana's oil and gas energy resources. Specifically, this report:

- 1) Presents a current engineering estimate of proven crude oil and natural gas reserves.
- 2) Identifies merits of economic producing methods and discusses the effects of Montana's oil and gas tax structure on industry exploration activity.
- 3) Discusses environmental impact and conservation concerns of oil and gas exploration, and
- 4) Suggests recommended approaches to taxation and regulatory measures that can serve as incentives to stimulate increased oil and gas exploration activity in Montana.

## SUMMARY

Montana is not a good place for the oil and gas industry to do business. The continued excessive tax burden on the oil and gas produced in this State could result in Montana's remaining oil and gas reserves to be totally depleted in less than ten years. In 1973, about 10 percent of the oil and gas reserves were being produced with minimum new reserves being discovered during that time. New oil and gas reserves can be developed and could lead to a viable, thriving industry in Montana. For this to be realized,

- 1) a renewed, vigorous exploratory effort must be initiated in Montana's many geologic provinces, and
- 2) the application of new production technology, such as secondary recovery techniques, can improve recovery from known oil deposits in Montana.

Each requires an improved business climate for the oil and gas industry; each demands the investment of large amounts of risk capital. Reasonable profit incentives and a reasonable tax structure are necessary to attract the investors of risk capital.

A healthy oil and gas industry is important to meeting Montana's long-term energy needs and a healthy oil industry requires an improved business climate and a more equitable tax burden. A healthy oil and gas industry can contribute in an even more significant way to the economy of Montana and not deter from the Big Sky quality of life.

It is therefore recommended that the Montana energy policy include a 50 percent reduction of the tax burden imposed on Montana oil and gas production.

## OIL RESERVES INVENTORY

Montana's remaining oil reserves were 334,000,000 barrels on January 1, 1974 as indicated in the Oil and Gas Conservation Division Annual Review for the Year 1973. The State of Montana - Summary of Producing Oil Fields - 1973 tabulation is presented as Appendix A with the permission of the Commission Petroleum Engineer.

These data indicate an original oil-in-place volume of 3,931,950,000 barrels of oil. Approximately 19.8 percent of the in-place volume (779,510,000 barrels) will be ultimately produced by primary recovery methods. An additional 9.2 percent of the in-place volume (360,290,000 barrels) is expected to be ultimately produced by existing secondary recovery projects. At the economic limit of production, Montana's current reserves will be depleted with an indicated ultimate recovery of 29.0 percent of the original oil-in-place.

Total production from 128 Montana fields during 1973 was 34,620,182 barrels of oil, up slightly from 1972. Annual Montana oil production for the five most recent years is presented in Table I below.

TABLE I - ANNUAL MONTANA OIL PRODUCTION

Year	<u>1969</u>	<u>1970</u>	<u>1971</u>	<u>1972</u>	<u>1973</u>
Million of bbl.	43.9	37.9	34.6	33.9	34.6

Sizeable declining production rates in 1969-70 and 1970-71 identify the depletable nature of oil reserves. The smaller rate of decline in 1971-72 and a slight production increase in 1972-73 is noted; these trend reversals can be attributed mainly to the influence of positive reservoir responses to secondary recovery operations in certain fields in Southeastern

and Central Montana, together with several small new discoveries. This is significant because the declining overall production rate was halted with new on-stream production; also of importance was that 2,500,000 barrels of oil were added to Montana's reserves in 1973. It was, however, necessary for the industry to drill 366 dry exploratory holes to obtain 6 new producing exploratory oil wells; another 100 dry holes were drilled to obtain 46 new development oil wells in 1973. Development wells generally confirm previous reserves estimates rather than delineate new reserves.

Montana oil production must necessarily compete economically with that from the rest of the world, including the Arab nations. A contrast in the overall Montana and Arab nation oil producing operations will serve to amplify reasons for the scarcity of risk capital domestically. A Saudi Arabian well was recently completed as a flowing oil well with a daily producing rate of 50,000 barrels of oil per day; during 1973, Montana's 3000 oil wells produced a total of 95,000 barrels per day. The daily production from all of Montana's 3,000 wells is equal to the production from just two good Saudi Arabian wells. Admittedly, this extreme example was purposely chosen to help Montana legislators begin to understand the types of competition faced by the Montana oil producing industry. Appendix B presents in its entirety a position paper prepared by Hugh E. Palmer, President, Cardinal Petroleum Company, dated February 12, 1973.

Mr. Palmer's paper was prepared well ahead of the now infamous Arab nations' boycott of world oil demand late in 1973 and extending well

into 1974. He describes reasons for the general lack of domestic United States oil and gas reserves development in a lucid manner, and clearly predicted the result of our continued dependence on import oil supplies. An astute "wildcatter," Mr. Palmer expressed to the author his personal opinion that "Montana is a wonderful place to live but one Hell of a place to do business" (as an explorer and producer of oil and gas).

Montana's oil producing industry generated about \$112,000,000 of new wealth in Montana during 1973, as shown in the following computation.

$$34,620,182 \text{ bbl.} \times \$3.23/\text{av. bbl.} = \$112,000,000$$

Of that amount, \$14,000,000 went directly to the Montana landowner in the form of royalty paid at the rate of 12.5 percent. Another \$10,300,000 (\$0.2974/bbl.) was paid directly as taxes to the State and local governments in Montana. This basic industry also supports the Montana economy with a significant employee payroll and helps to meet the Nation's energy fuel needs.

Recently improved wellhead prices of oil will tend to improve the Montana oil reserves status and economy in several ways. It will

- 1) allow previously marginal and uneconomic wells to stay on production,
- 2) encourage the initiation of additional secondary recovery projects, and
- 3) allow better economics tend to spur exploration activity, the main source of significant new oil reserves.

It should be noted, however, that other more profitable and competitive exploration projects in neighboring oil producing states have certainly

tended to attract the risk capital of investors in the past and can be expected to continue to do so in the future because of the less burdensome oil tax structures in all neighboring states. State oil tax comparisons have been made by a number of organizations over the years. Table II presents 1972 oil tax comparisons for eleven nearby oil producing states; Table III indicates the continuing escalation of the Montana oil taxes with time. These data certainly demonstrate the need for reducing Montana's oil tax burden by at least 50 percent.

TABLE II  
1972 TAX COMPARISONS<sup>1</sup>

<u>State</u>	<u>Tax Per Barrel</u>	<u>Ratio of Tax to Value</u>
Arizona	\$0.2335	7.63 %
Colorado	\$0.1610	4.85 %
Kansas	\$0.1412	4.27 %
Montana	\$0.2747	9.18 %
Nebraska	\$0.1056	3.11 %
New Mexico	\$0.2031	6.15 %
North Dakota	\$0.1573	5.00 %
Oklahoma	\$0.2380	7.00 %
South Dakota	None	None
Utah	\$0.1584	5.19 %
Wyoming	\$0.2025	6.54 %

TABLE III  
MONTANA OIL TAXES<sup>2</sup>

Year	<u>1959</u> <sup>3</sup>	<u>1970</u>	<u>1971</u>	<u>1972</u>
Tax, \$/bbl.	0.2425	0.2620	0.2747	0.2974

NATURAL GAS RESERVES INVENTORY

As of January 1, 1974, estimated remaining Montana reserves of natural gas were 600 billion cubic feet (BCF). A cumulative production of 1,900 BCF have been recovered to date in Montana. Gas production from 35 Montana fields during 1973 was 57,739,515 MCF. At \$0.20/av. MCF; this production generated \$11.5 million gross value income to Montana; about 60 BCF gas production is anticipated for 1974 with a gross value of about \$17.0 million. An increased value is expected in 1974 because of recently renegotiated gas contract prices for very old and relatively new gas reserves in Montana.

The most recent comparative tax study of Montana's gas producing industry was made and reported by D. H. Harnish, Jr., of the Montana Bureau of Mines and Geology in 1964.<sup>4</sup> Results of this study are summarized in Table IV below.

TABLE IV  
1962 NATURAL GAS TAX COMPARISONS

<u>State</u>	<u>Tax Rate Per MCF</u>	<u>Percent Of Gross Value</u>
Colorado	\$0.00481	4.2 %
Montana	\$0.00466	6.3 %
Nebraska	\$0.00692	4.2 %
North Dakota	\$0.00719	5.7 %
Utah	\$0.00313	2.0 %
Wyoming	\$0.00237	1.9 %

Analysis of a typical gas well in a 54-well producing unit of the Tiger Ridge (gas) Field of Hill County indicates the following cost

characteristics during 1973.

Operating and Maintenance Cost = \$225/well/month

State and Local Taxes = \$450/well/month

During 1973, these 54 Tiger Ridge producing wells produced about 14,000,000 MCF of natural gas. All natural gas production from Tiger Ridge Field is contracted for sale at the rate of \$0.235/MCF.

On these bases, the following computations can be made.

Total Gas Taxes = \$ 292,000

Gross Value of Produced Gas = \$3,300,000

Gas Tax % of Gross Value = 8.9 %

Gas Tax, \$/MCF = \$0.021

This example of a specific gas field clearly shows that a significant portion of the cost of producing natural gas in Montana is the cost of taxes. These data also indicate that the State natural gas tax rate has been quadrupled in eleven years, if the gas tax rate in this Tiger Ridge Unit can be considered representative of the average gas tax rate in Montana.

It is recognized that the use of these specific gas field data is an over-simplification of the complex gas tax situation in Montana. This analysis does, however, reveal that the gas producing industry is paying an excessively burdensome tax bill in Montana, by whatever yardstick is applied.

## EXPLORATION POTENTIAL IN MONTANA

An examination of regional trends of existing oil and gas production will help identify the future oil exploration potential in Montana. The geographical trends of Alberta oil fields to the North tend to be aligned with those of the Wyoming, Colorado and Utah oil fields to the South of Montana. The trends appear to terminate at the Montana borders, however, both on the North and the South; a decided, obvious discontinuity of these trends is present in the State of Montana. These trends and the Montana discontinuity is readily observed in the Rocky Mountain Region Oil and Gas Field Map, published in the April 1974 issue, Western Oil Reporter. This map is included by permission of Mr. Donald Hart, Publisher, as Appendix C.

It is apparent that favorable geologic basins which are analogous to those of adjacent states, are also present in Montana. Most of the easily found and less costly-to-drill, shallow geologic structures and traps have been drilled in Montana; many of these account for most of Montana's 826.5 million barrels cumulative oil production and 1,900 billion cubic feet cumulative gas production to date.

The Rocky Mountain states are known for their generally smaller geologic structures and traps, some of which occur at great depths. Some of these are still being explored in Montana and adjacent states; most current domestic exploration drilling activity is being focused on the large structures of the United States Continental Shelf areas because of large reserves potential in a single pool. Continental Shelf exploration risks are great, costs are high, but the anticipated

profit incentives for the risk capital investor are, likewise, great. For these more obvious and perhaps other more subtle reasons, only limited amounts of risk capital have been budgeted for Montana exploration activity in recent years.

Only in the Williston Basin have Montana's deeper oil producing potential horizons been significantly tested. Deep tests are expensive and especially require a favorable business climate for the encouragement of oil and gas exploration programs and subsequent production. When implemented, deep tests will yield significant new reserves, which could equal and possibly exceed the volume of previously discovered oil and gas in Montana. Virtually untested geologic basins of the Southwest and Northwest portions of Montana could also yield sizeable new oil and gas reserves. Exploration activity in large areas of Central and Northern Montana could likewise result in sizeable new oil reserves potential.

Improved secondary and tertiary oil recovery techniques could easily yield new reserves equal to those already produced to date in Montana.

In view of the foregoing considerations, a conservative estimate of potential new reserves to be developed in Montana would be upwards of 2 billion barrels of oil and 2,500 billion cubic feet of natural gas. Such development assumes the introduction of exploration and production incentives rather than the retention of existing deterrents.

ECONOMIC IMPACT

1973

Oil produced	=	34,620,182 bbl.	
Price/bbl. (Av.)	=	\$3.23/bbl.	\$112,000,000
Tax/bbl. (Av.)	=	\$0.2974/bbl.	\$ 10,300,000
Royalty to owner	=	12.5% gross	\$ 14,000,000
Gas produced	=	57,739,515 MCF	
Price/MCF (Av.)	=	\$0.20/MCF	\$ 11,500,000
Tax @ 10% of value	=	10% gross (approx.)	\$ 1,150,000
Royalty to owner	=	12.5% gross	\$ 1,440,000

1973 Total Gross Income, Oil & Gas	\$123,500,000
1973 Total Tax, Oil & Gas	\$ 11,450,000
1973 Total Royalty, Oil & Gas	\$ 15,440,000

1974

Oil produced(est.)	=	35,000,000, bbl.	
Price/bbl. (Av.est.)	=	\$7.00/bbl.	\$245,000,000
Tax/bbl. (@ 9% of value)	=	\$0.60/bbl.	\$ 22,000,000
Royalty to owner	=	12.5% gross	\$ 30,700,000
Gas produced (est.)	=	60,000,000 MCF	
Price/MCF (Av.est.)	=	\$0.28/MCF	\$ 16,800,000
Tax @ 10% gross	=	10% (approx.)	\$ 1,680,000
Royalty to owner	=	12.5%	\$ 2,100,000

1974 Total Gross Income, Oil & Gas	\$261,800,000
1974 Total Tax, Oil & Gas	\$ 23,680,000
1974 Total Royalty, Oil & Gas	\$ 32,800,000

These data demonstrate that the oil and gas producing industry direct contribution to Montana in the form of taxes alone approaches 10 percent of the gross value of the cash receipts. Another 12.5 percent of the gross value goes directly to the landowner in the form of royalty payments which, in turn, generate additional direct tax income to the State. The operation and maintenance of the production facilities, the annual drilling of over 700 new wells, the transportation and processing of Montana's oil and gas production and the marketing of refined oil and gas products provide jobs for thousands of Montanans---an indirect source of many additional tax dollars in Montana.

An interesting comparison of the relative amount of direct tax dollars generated by each of Montana's major industries expressed as percentages of the corresponding cash receipts generated by each, would identify some large-scale inequities in industrial taxation in Montana. Such a comparison should be made by a qualified economist and is highly recommended.

All of Montana's industries are important assets to its economy; more importantly, every healthy industrial activity requires operational manpower in the form of jobs. A healthier, more profitable industrial activity means more and better job opportunities for young Montana citizens. Lower tax rate structures can, with proper incentives, provide for increased industrial activity in Montana. This will, in turn, create a broader tax base, a better economic climate and a significantly improved job opportunity situation for every Montanan.

It would appear to be a much better Montana energy economic policy to more completely process Montana's basic resources. To export

a final consumer-demand finished product, if at all possible, means repeated earnings increments from each additional processing of every unit of Montana basic raw material resource. Such a policy would help create a thriving Montana economy with abundant job opportunities. Montana then would become a net exporter of refined goods and services; Montana is now a net exporter of raw and semi-processed materials and, with them, a resultant net exporter of important job opportunities for young Montanans.

## ENVIRONMENTAL IMPACT

Oil and gas drilling and production operations can and occasionally do create some minor accidental ecological disturbances. Prudent operators do provide for returning the disturbed area to its original condition within a short time. Such practices have long been a part of the industry's normal operating policy. New lease agreements and environmental protection plans for Federal lands operations must be approved by the District Forester. Leases on Federal lands will not be granted if the lands in question are being considered for such things as wilderness areas, parks, scenic rivers, etc.

The placement of underground oil and gas transmission pipelines can create temporary environmental insults. Because they are buried, with minor surface indications of their presence, underground transmission line installations cause damages that are readily reclaimed.

Occasional spills around the surface production facilities can and do occur; provisions for eliminating the insult, as well as the cause of the insult, have become routine procedures. Often times surface damage claims of the landowner exceed the real value of the land but are paid without equivocation. On rare occasion, a damage claim is totally unreasonable; then the litigation is settled in the courts. Oil operators, however, prefer to handle damage claims without the attendant adverse publicity of a court procedure.

Road facilities are important for access to drilling and production sites. The site is normally attractively equipped and even landscaped in many cases. The classical landscaping efforts are notable in

the residential areas of California, and especially on the off-shore drilling-production islands near Long Beach, California. Trees and other plantings camouflaged the land-ward side of the island and tall dericks were covered with panelling and lighting to present a view of attractive buildings to the observer. The panelling was also designed to effectively muffle the sound pollution.

Only in some rare instances have environmental impacts of oil well drilling, production and transmission practices created serious problems. Even these rare instances have ultimately been satisfactorily resolved, usually with the expenditure of large sums of money.

It is reasoned that the prudent oil and gas operator will provide for the reclamation of any environmental degradation that may occur in Montana as a result of his exploration and production activity.

RECOMMENDED LEGISLATIVE ACTION

The results of this analysis of the oil and gas energy resources of Montana lead to the recommendation of legislative action with respect to taxation and regulation. The recommended action is considered as incentive-type legislation and must be designed to provide a Montana tax structure and attitude that is competitive with neighboring states and is conducive to attracting the investment of high-risk exploration capital to Montana.

- 1) It is recommended that the Montana State and local oil and gas tax structure be overhauled to effectively reduce by 50 percent the tax bill of the oil and gas producing industry in Montana. Maintenance of the status quo can only serve to prevent the necessary orderly improvement of Montana's oil and natural gas reserves.
- 2) It is recommended that a "drilling commitment clause" be incorporated in all State and Federal lands oil and gas lease agreements. The recommended "clause" should provide for the forfeiture of the lease if the drilling of at least one well on the leased land has not commenced at the end of a specified time period (one year) from date of lease agreement. The "clause" should further provide for the commencement of drilling of at least one additional test well each year thereafter by lease anniversary date, with penalty of lease forfeiture for

non-compliance. This recommendation provides an incentive to either drill or forfeit the lease to another interested operator. It should be noted that many Montana landowners are already incorporating a "drilling commitment clause" in their negotiated oil and gas leases.

REFERENCES

1. "Taxes Affecting Oil and Gas Production Within the Rocky Mountain and Midwest Regions," by the Property Tax Committee, Rocky Mountain Oil and Gas Association, September, 1973.
2. "MPA-RMOGA Tax Study 1971-1972 Montana Oil Production," Jack Rehberg.
3. "A Comparative Tax Study of Montana's Oil Industry," D. H. Harnish, Jr., 1961, Montana Bureau of Mines and Geology Special Publication 20.
4. "A Comparative Tax Study of Montana's Gas Producing Industry," D. H. Harnish, Jr., 1964 Montana Bureau of Mines and Geology Special Publication 30.



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APPENDIX B

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CARDINAL PETROLEUM COMPANY  
ANALYSIS OF ENERGY SHORTAGE  
CAUSES AND RECOMMENDATIONS

The American people are currently facing something new in their lives: an acute energy shortage. Except in times when all resources were mobilized for war, the people of this nation have always been able to take for granted adequate supplies of fuel and electrical energy. Such is no longer the case. Whether one wishes to acknowledge it or not, our nation today faces a serious shortage of available domestic energy supplies.

This problem is particularly apparent as it applies to petroleum and natural gas which currently satisfy 75% of the nation's energy requirements. The primary cause of this shortage can be traced directly to the depressed prices of these commodities paid to producers at the well head, which has resulted from federal regulation of natural gas producers and strong government pressures that continue to adversely influence the price of crude oil. Since the middle 1950's when natural gas in interstate commerce came under the control of the Federal Power Commission, prices paid to producers for this most desirable and pollution free fuel have been artificially and unrealistically depressed. Meanwhile, the price of crude oil, in constant dollars, has deteriorated by almost 30% since 1957. As a result, investment capital applied to the search for new oil and gas deposits in the United States showed a marked decline during the last 17 years. This is reflected in a rather uniform decrease from 58,000 wells drilled in 1956 to 27,800 in 1971. During this same period, the total number of active independent producing and exploration companies, which, incidentally, drill approximately 75% of these wells, decreased by 33 1/3%.

Cardinal Petroleum Company's opposition to federal regulation of natural gas producers is historic and well documented. Even though Cardinal was producing no saleable gas in the mid 1950's, Company Management was of the opinion that federal regulation was bad for the domestic petroleum industry and equally bad for the country. Cardinal's opposition took the form of appearances in Washington, D.C. starting in the mid 1950's when the Harris-Fulbright bill to decontrol gas was being debated, and continues to the present.

Cardinal's position favoring mandatory import controls of foreign crude oil and petroleum products is also historic and well documented. From the very beginning, Cardinal has always supported the principle of limiting the volumes of imported crude oil and petroleum products. While it is recognized that the Mandatory Import Control Program as administered has certainly benefitted the domestic petroleum industry, it has always been Cardinal's contention that a program more restrictive of imports would have resulted in a more healthy domestic industry with crude oil prices sufficient to encourage the necessary exploration for new reserve discoveries in the United States.

Over the years, the management of Cardinal Petroleum Company has continually voiced its concern over what was happening to the domestic petroleum industry. Cardinal, being in the drilling contracting business as well as the exploration and producing phases, was in close contact with the independent segment of the industry and could see the deterioration of this segment as reflected in a continuing decrease in drilling bid requests received. This condition was pointed out on many occasions to various regulatory agencies but by and large the warning went unheeded.

Events of the past 17 years have shown Cardinal's appraisal to have been right. Government control of gas pricing has been bad for the country because it has discouraged exploration for new deposits of gas. The deteriorating price of crude oil resulting from strong government pressures to depress the price has prevented investment capital from being channeled into exploration for additional reserves. The end result is a critical shortage of available domestic oil and gas and a growing dependence on unreliable foreign imports. This dependence has grown to the point that in 1973 six million barrels of our nation's daily requirements of  $17\frac{1}{2}$  million barrels will come from imports. Unless something is done to correct the underlying cause of this situation it will be only a short time before the security of our country is in serious jeopardy, and the destiny of our nation placed in the hands of unpredictable foreign countries which control the supplies of crude oil and petroleum products exported to the United States. This is not an imaginary problem, but is instead a stark reality that must be faced.

The present situation is critical, and the problem facing the American people is, what can and should be done about it. The petroleum shortage that prevails is a shortage of available oil and gas, and is not, at this time at least, a shortage of possible undiscovered physical resources. It is well within reason to believe, as certain studies have indicated, that there are more reserves of crude oil and natural gas remaining to be discovered in the United States than have to date been discovered. But the search will require huge capital expenditures and a healthy domestic petroleum industry.

It is wishful thinking to believe that such necessary investment capital will be made available until the prices for oil and gas are allowed to seek their own levels as competitively produced commodities. The search for oil and gas are closely related, and anything that discourages exploration for oil will react on gas supplies because approximately 24% of our natural gas production comes from oil wells. The search for new oil reserves also results in additional natural gas discoveries.

To bring about this necessary adjustment, the first requirement is to remove the federal government from regulation of natural gas producers. Secondly, the Mandatory Import Control Program must be continued so that imports of foreign crude oil and petroleum products are used only to supplement, and not replace, domestic production. In addition, federal and state governments, as well as the public, must recognize the nature and magnitude of the task ahead and do whatever they can to encourage, rather than impede, the domestic petroleum industry in getting its job done. These changes in regulation, as well as attitude, must be made immediately so that the resulting benefits will not come too late. The lag time between the start of accelerated exploration planning and the end results of additional oil and gas production is measured in years, not days or weeks. For the past 20 years there has been a consistent relationship between the amount of money devoted to the search for petroleum and the proved reserves actually found. A healthy domestic petroleum industry operating in an atmosphere free from government restrictions and realizing a fair market value for the results of its labors, is the most logical approach to one of the more critical problems facing the nation today.

But these actions alone will by no means completely solve the growing energy problem. The anticipated demand for energy in the United States is such that all natural resources with energy producing potential may well be called into use. Oil shales and tar sands are approaching economic feasibility. Geothermal, solar, magnetohydrodynamics, tides, fuel cells, reclamation of trash, hydroelectric generation, nuclear reactors and breeder reactors may all be called upon to collectively provide the energy needs of the future. But as of today, the one material that can best assist petroleum and natural gas in providing immediate energy needs is coal. Without the utilization of vast amounts of this solid fuel, it is extremely doubtful that the present standard of living can be maintained for the American people.

There are those who today loudly proclaim that the standard of living we enjoy in the United States is an unnecessary luxury. Cardinal Petroleum Company takes exception to this line of thinking, and is of the firm opinion that future generations of Americans are entitled to at least the standard of living enjoyed by those who preceded them, as long as such is obtainable through utilization of existing resources. What right does anyone have to deny them this if it can be made available?

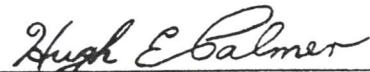
The time has come when we must face the reality that coal must be utilized to assist petroleum and natural gas in providing the energy needs of the immediate future if our current standard of living is to be maintained. For this reason, Cardinal Petroleum Company assumes the position that a moratorium or banning of the strip mining of coal would not be in the best interests of the American people. Cardinal's position derives not from selfish interests because it has no coal leases nor any vested interest in coal properties. As a matter of fact, Cardinal, being an oil and gas producing company, might logically stand to benefit from such a moratorium or banning because it would remove a competitive source of energy from the market. The serious nature of the situation, however, precludes the acceptance by Cardinal of such a narrow outlook, and necessitates assuming the position that the utilization of coal to assist petroleum and natural gas in providing for immediate energy needs is an absolute necessity. Reasonable people, working cooperatively and constructively, should be able to arrive at reasonable safeguards to the environment in the extraction and use of this vital energy source.

This Position Paper has been prepared to inform the public of Cardinal Petroleum Company's past and present concern for the security of this nation, the strengthening of the free enterprise system of operation, and the preservation of our existing standard of living which we are morally obligated to extend as a legacy to future Americans.

It is further our purpose to emphasize that Cardinal's past predictions have proved correct, and to give consideration to the consequences that would follow should our appraisal of the present situation again prove to be right. It is our considered opinion that if prices for oil and gas are not allowed to seek their own levels as competitively produced commodities, and if coal is not utilized to assist petroleum and natural gas in providing immediate energy needs, the United States will soon find itself in an untenable security position with its fate resting in the hands of those foreign governments which provide it with exports of crude oil and petroleum products.

There are those who do not agree with this and proclaim there is no energy shortage. Only time will tell who is right or wrong. Meanwhile, there is no escaping this fact: if Cardinal is wrong in its appraisal of the energy shortage it will cost the American people nothing because the prices paid for oil and gas will adjust to lower levels as competitively produced commodities; if those who proclaim there is no energy shortage are wrong, and no action is taken to correct the existing situation, the cost to the American people could be their way of life.

CARDINAL PETROLEUM COMPANY



Hugh E. Palmer  
President

Billings, Montana  
February 12, 1973

