REMARKS

VICE PRESIDENT HUBERT HUMPHREY

AMERICAN MINING CONGRESS

SALT LAKE CITY, UTAH

SEPTEMBER 12, 1966

No one here will be surprised to hear me say that I am not an authority on mining -- ~~you didn't invite me to speak at one of your technical sessions.~~ But I do come from a state that has supplied the iron ore for this nation.

And I will yield to no one here in awareness and appreciation of what the mining industry has done for the development and growth of America...of what it contributes... today...and of the essential part it must play in our future.

In the early days, precious metal mining was one of the prime sources of capital formation in our country. But that contribution turned out to be almost trivial in comparison to its role in laying the base for industrial development and growth.

No figures on per-capita income tell nearly as much about the better life as the first experience of riding in an automobile instead of walking...of turning up the thermostat instead of carrying in another armful of wood...of switching on the washing machine instead of applying the rub-de-ub-dub to the corrugated washboard...or of picking up the telephone to call the doctor instead of setting out on foot to find him.

We know the meaning of a rising level of living, and we know the source of the materials that have helped make it possible. And we know also the raw-material source of our economic strength, and the part that minerals and fuels play in our national security.

All of us, ~~then, must~~ are impressed with the achievements of the mineral industry in helping to lay the base for our national prosperity and our national strength.

But what about the future?

What national needs lie ahead and what demands and challenges do they present to you in the mineral industry?

America a Growing Country -

Growing Nation

Des Moines - Food - More -

Growth

~~I think we ought to face these questions fully and openly:~~

~~First of all, I must point out that~~ If we are to sustain ~~sustain a~~

more | a healthy economic growth in our country, our economy will need more mineral input. In the case of ~~For~~ many minerals you will have to find and produce, between now and 1990, two to three times as much as you already have ~~on hand~~ done.

For many minerals, the cumulative requirement during the next quarter of a century will be larger than the total amount found and mined during all of our history.

For some minerals this growing demand may pose no problem. But for many others it presents a real [redacted] challenge. ~~and in a moment I want to say more about this.~~

~~But~~ [redacted] ~~let me mention another challenge regarding future production that puts the first one in the shade.~~ And ~~We~~ we need ~~want~~ to meet these expanding requirements at decreasing costs — as we have done with coal — (our exports) (17 Tons Per Man Day Average) !

I AM WELL AWARE THAT MUCH OF OUR MINERAL SUPPLY DOES NOT COME FROM DOMESTIC SOURCES, ~~AND THAT THERE IS A GRADUAL TREND TOWARD INCREASED IMPORTS~~.

AND AS YOU KNOW, WE NEED TRADE AND THIS ADMINISTRATION FAVORS LIBERAL TRADE.

BUT OF ONE FACT THERE CAN BE NO DOUBT: A STRONG DOMESTIC MINERAL INDUSTRY IS ESSENTIAL TO THE SECURITY AND ECONOMIC WELFARE OF THE UNITED STATES.

AND IF OUR DOMESTIC MINERAL INDUSTRY IS TO BE STRONG, THIS MEANS CONTINUING RESOURCEFULNESS ON THE PART OF THE INDUSTRY TO ADVANCE ALL PHASES OF MINERAL TECHNOLOGY.

I KNOW THAT YOU IN THE MINING CONGRESS HAVE BEEN INTERESTED IN THE PROGRESS OF THE ULLMAN--GRUENING ~~BILL~~ al Ullman mess Bill HR 4665, CONCERNING THE TAX TREATMENT OF MINERAL EXPLORATION EXPENSES. I'M PLEASED TO REPORT THAT THE

Talked to the White House! this noon!

PRESIDENT WILL SIGN (TODAY) THIS IMPORTANT BILL WHICH CAN MEAN SO MUCH TO YOUR INDUSTRY.

AS YOU KNOW, UNDER THE PREVIOUS LAW, FOR INCOME TAX PURPOSES, YOUR EXPLORATION EXPENSES WERE TREATED AS CAPITAL INVESTMENT, EXCEPT FOR A VERY MODEST AMOUNT WHICH WAS ALLOWED TO BE TREATED AS NORMAL BUSINESS EXPENSES. NOW, UNDER THE NEW BILL WHICH WAS INTRODUCED BY CONGRESSMAN AL ULLMAN OF OREGON AND SENATOR ERNEST GRUENING OF ALASKA AND MOSS OF UTAH + others YOUR INDUSTRY IS GIVEN THE ALTERNATIVE OF EXPENSING ALL EXPENDITURES FOR EXPLORATION, WITH A RECAPTURE OF THOSE EXPENDITURES WHICH ACTUALLY LEAD TO MINE DEVELOPMENT. IN SPITE OF THE DEFERRAL OF FEDERAL REVENUE WHICH WILL RESULT, I'M PLEASED TO SEE THAT THIS LEGISLATION WILL BECOME LAW.

7 min

IN MY STATE WE'VE KNOWN A BIT ABOUT MINING FOR A CONSIDERABLE PERIOD OF YEARS --- AND WE HAVE LEARNED THAT THE KIND OF TAX TREATMENT GIVEN MINING CAN MAKE A TREMENDOUS DIFFERENCE IN THE SIZE AND HEALTH OF THE MINING INDUSTRY. I'M SURE THAT THIS FLEXIBILITY IN TAXATION WILL STIMULATE ADDITIONAL MINERAL EXPLORATION --- NEEDED EXPLORATION --- WHICH WILL SIGNIFICANTLY INCREASE RESERVES OF THE UNITED STATES. THIS IS AN IMPORTANT STEP, A TIMELY STEP, AND ONE WHICH IS IN THE BEST INTEREST OF THE ENTIRE NATION.

Chris Benkema

FROM MY OWN EXPERIENCE IN MINNESOTA, I KNOW ~~ABOUT~~ a little about TACONITE AND THE MIRACLES YOU HAVE PERFORMED IN OBTAINING A BETTER AND CHEAPER PRODUCT FROM A MATERIAL ONCE CONSIDERED TOO REFRACTORY TO MINE AT ALL. THE DEVELOPMENT OF TACONITE HAS BEEN A BLESSING TO THE ECONOMY OF MY STATE.

IN MINNESOTA, WE ARE CONCENTRATING ON THE APPLICATION OF NEW TECHNIQUES TO LOW-GRADE RESOURCES. THIS IS BEING DONE THROUGH THE COOPERATION OF THE FEDERAL, STATE, AND LOCAL GOVERNMENTS.

THERE IS NOW UNDER CONSTRUCTION $400 MILLION IN NEW TACONITE FACILITIES ON THE IRON RANGE IN NORTHERN MINNESOTA. THIS HAS PROVIDED A WHOLE NEW FUTURE TO THE RANGE --- ONCE THE GREATEST PRODUCER OF NATURAL ORES. IN THE NEXT EIGHT YEARS, PRIVATE INVESTMENT IN THESE TACONITE FACILITIES WILL REACH $800 MILLION AND POSSIBLY $1 BILLION.

THIS NEW INVESTMENT NOT ONLY HAS ELIMINATED UNEMPLOYMENT ON THE IRON RANGE, IT HAS DONE AWAY WITH SEASONABLE UNEMPLOYMENT. BECAUSE THE MINERS NOW WORK INDOORS, THERE ARE AS MANY EMPLOYED IN JANUARY AS THERE ARE IN JUNE OR JULY.

(page 2 of insert)

MUCH OF THE CREDIT FOR DEVELOPMENT OF THESE TACONITE FACILITIES GOES TO MY GOOD FRIEND, PROFESSOR E. W. (ED) DAVIS, WHO FOR THIRTY YEARS WORKED ON THIS AT THE MINERAL EXPERIMENT STATION AT THE UNIVERSITY OF MINNESOTA.

BOB LINNEY, WHO, AS I RECALL, WAS YOUR ENGINEERING MAN OF THE YEAR ABOUT FOUR YEARS AGO, ALSO HELPED TO SET UP THE FIRST TACONITE PLANT --- THE RESERVE MINING COMPANY. (Bill Bryant here)

HAVE BEEN SPEAKING OF MAGNETIC TACONITE. THERE ARE ALSO HUGE RESERVES OF NON-MAGNETIC TACONITE, AND THESE CONSTITUTE BY FAR THE LARGEST RESERVES IN THE MINNESOTA IRON RANGE. BEING NON-MAGNETIC, THIS RESOURCE because REMAINS UNTAPPED. IT CANNOT BE SEPARATED BY CONVENTIONAL MEANS.

(page 3 of insert)

WE HAVE HUGE RESOURCES OF SCRAP AUTOS LOCATED THROUGHOUT THE UNITED STATES. EVERYONE WOULD LIKE TO SEE THIS BLIGHT ON THE LANDSCAPE REMOVED.

THE BUREAU OF MINES IS ATTEMPTING TO GET THE BEST OF TWO WORLDS, AND A PILOT PLANT PROJECT IS CURRENTLY IN OPERATION AT THE BUREAU OF MINES LABORATORY IN MINNEAPOLIS --- WHEREBY THESE SCRAP AUTOS ARE CHEWED UP, MIXED WITH NON-MAGNETIC TACONITE, and ROASTED. AND IN THE PROCESS THE NON-MAGNETIC TACONITE BECOMES MAGNETIC, AND THE SCRAP AUTOS ARE ALSO CONVERTED TO HIGH-GRADE ~~MAGNETIC~~ IRON ORE.

THE TWO ARE COMBINED TO FORM FEED FOR THE BLAST FURNACES TO FEED THE HUNGRY STEEL MILLS OF THE COUNTRY.

AN ANNOUNCEMENT IS EXPECTED SHORTLY OF A DEMONSTRATION PLANT TO BE CONSTRUCTED IN MINNESOTA, WHICH WILL BE THE FORERUNNER, WE HOPE, OF MANY PLANTS WHICH WILL UTILIZE THIS PROCESS.

(page 4 of insert)

THE M. E. HANNAH COMPANY ALSO IS DOING EXTENSIVE WORK IN [redacted] MINNESOTA ON THE IRON RANGE IN THE CONVERSION OF SEMI-TACONITE TO TACONITE.

BUT TACONITE IS NOT THE ONLY MINERAL THAT HAS BROUGHT NEW LIFE TO NORTHERN MINNESOTA.

LAST SUMMER INTERNATIONAL NICKEL (INCO) ANNOUNCED AN $85 MILLION UNDERGROUND MINE TO PROCESS LOW-GRADE COPPER NICKEL. THIS IS LOCATED ABOUT SIX MILES SOUTHEAST OF ELY IN THE NORTHERN MINNESOTA IRON RANGE.

THE LEASE THAT INCO SIGNED WITH THE DEPARTMENT OF THE INTERIOR FOR FEDERAL LANDS WAS THE FIRST OF ITS KIND. THAT COMPANY NOW IS NEGOTIATING FOR ROYALTIES WITH THE STATE OF MINNESOTA.

WE NOW ARE WORKING ON THE COMPLEX PROBLEM OF SEPARATING IRON ORE, MANGANESE AND SULPHIDES. THIS IS

BEING DONE ON THE CUYUNA RANGE NEAR CROSBY-IRONTON IN THE NORTHERN PART OF OUR STATE. RESEARCH PRESENTLY IS BEING CONDUCTED BY THE FEDERAL GOVERNMENT, THE STATE OF MINNESOTA, AND LOCAL GOVERNMENT. WE ARE HOPEFUL THAT OUT OF THIS RESEARCH WILL COME INVESTMENT FACILITIES, SUCH AS WE HAVE SEEN WITH TACONITE AND NICKEL.

As you know, this Administration favors liberal trade.

But of one fact there can be no doubt: A strong domestic mineral industry is essential to the security and economic welfare of the United States.

We want it to be strong because it is viable and competitive, however, and this means continuing drive and resourcefulness on the part of the industry to advance all phases of mineral technology.

I've been speaking about fairly long-range requirements for over-all mineral production, but let me mention now some individual minerals that pose problems over the shorter term.

Our commitments in Vietnam have stepped up requirements for several metals, and before I say more I want to applaud and thank the metals industries for their efforts and response in meeting these increased demands.

Tight markets!

But splendid as the effort has been, military requirements and civilian demand have produced tight markets for many metals that bring strong pressure to bear on prices, to say nothing of the inconveniences they cause to supplier and buyer alike.

No doubt many of you have questioned our efforts to hold the line on prices. But, I am confident that you recognize the importance of these efforts in restraining price inflation.

The primary metal industries, and the mineral industries in general, are what the economists like to call forward multipliers -- they affect growth in a whole chain of manufacturing industries and consumer activities.

Favorable prices and abundant supplies of key raw materials may be multiplied many times in the economy as a whole, and by the same token higher prices are also felt throughout the economy.

~~It is true that~~ What you do affects the entire economy to a much higher degree than is the case for many other industries.

And I need not expand, I am sure, on the benefits to the mining industry itself of containing inflation, for -- as a high consumer of machines and other manufactured goods -- you are deeply affected by price increases in the forward industries that you supply.

The problem of tight supplies in both the domestic and world market is particularly critical for the heavy metals in general, including mercury, silver, gold, and others.

How to solve these tight-market problems, and help stave off inflation, is the challenge facing you and your government.

I sense that there are two parts to the problem that perhaps require somewhat different solutions.

In one case, the rate of increase in demand strains available production capacity, but not the ultimate ability of the industry to meet growing demands over the longer range.

In the other, there is a world shortage not only in production capacity but in reserves as well.

Iron, aluminum, copper, and molybdenum (mō-lyb-dē-nŭm) would appear to belong to the first group, and gold, silver, and mercury seem to fit the second category.

For the first, improved production facilities and efficiencies may be the answer, but for the second the answer seems to require new discoveries and new sources of supply. #

The inter-relationships in the world of technology are always surprising. As you know, I am chairman of the Space Council.

Gemini 11

While there would seem to be an enormous gulf between the hard-rock miner and the astronaut speeding through the limitless reaches of outer space, the fact is that their relationship is very close. Until very recently, the greatest single missing ingredient to successful space travel has been materials of the toughness, lightness, resistance to heat and stress, required to build both practical spacecraft and the engines to power them.

Few metals have escaped playing some role in space flight, for as our knowledge expands and our cleverness in applying materials increases, we have found we need both the familiar metals and also the more exotic, rarer ones.

But the space program is more than a market for the mining industry. Its special requirements have led to the development of new uses, new casting and machining techniques which will find wide applicability as our technological civilization progresses.

Not only does the space program use metals, but it can also help in discovering them.

Prospecting will continue to need people on the ground. But space-borne magnetometers, and gravity sensors can locate bodies of ore. Special infrared and ultraviolet detectors and other special color-sensitive photographic film can detect the telltale signs in soil and vegetation of certain kinds of mineral deposits. These will become important new tools just as aerial surveys from planes have become widely used.

The space program is one of the ways the federal government has stepped up its efforts to help develop exploration tools and methods, and help lay the groundwork for exploration.

Beginning this year, the Geological Survey and the Bureau of Mines have been authorized to greatly expand their efforts in research on the ore controls and

habits of the heavy metals, on exploration tools and methods, on geologic mapping, and on improved methods of mining and recovery.

Our purpose is not for the government to directly enter the fields of exploration and mining but to help define favorable ground for industry to explore, and to improve the technology of exploration and production to help industry tackle more difficult problems at lower cost. The Survey's and the Bureau's results will be made available to you quickly through publications and press releases. We hope you will follow up their leads, and press your initiative in developing your own new approaches.

There is good reason to believe that advanced exploration science and extraction technology will yield important discoveries and increased production of heavy metals, even for the precious metals that have been sought so intensively throughout man's history.

The important gold discovery at Carlin, Nevada, came as a result of imaginative follow-up on the part of industry of equally imaginative geologic mapping and analysis on the part of the Geological Survey.

As I understand it, not only is there no trace of the ore at the surface at Carlin, but the ore-bearing rocks and structures have no surface indication either. The old sourdoughs literally left no stone unturned in their examination of the surface, but they did not have the methods to see into the ground and probe for ore deep beneath the surface.

Carlin is now our second largest gold producer and its reserves are estimated to be about one hundred million dollars in gold.

There is another large area in which the government is expanding its activity as an aid to the development of mineral resources -- namely the ocean.

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(C) (Atomic Energy Commission)

THE DAY IS APPROACHING WHEN TECHNOLOGY FOR FRACTURING VAST BLOCKS OF ROCK BY NUCLEAR DEVICES WILL FIND WIDE APPLICATION IN THE MINERAL INDUSTRY. THE GEOLOGICAL SURVEY, BUREAU OF MINES, AND THE ATOMIC ENERGY COMMISSION ARE WORKING JOINTLY WITH INDUSTRY IN DESIGNING EXPERIMENTS FOR USING THIS NEW TECHNOLOGY.

PLANNING FOR EXPERIMENTS IN SEVERAL AREAS IS WELL ADVANCED. INCLUDED ARE TESTS FOR:

1. FRACTURING OF TIGHT GAS FORMATIONS TO INCREASE THE RATE OF NATURAL GAS FLOW.

2. BREAKING OF LOW-GRADE COPPER ORE FOR IN-PLACE ~~LEACHING~~ LEACHING.

3. FRACTURING OF OIL SHALE FOR IN-PLACE RETORTING.

4. PREPARATION OF UNDERGROUND CAVITIES AND FRACTURES FOR STORAGE OF NATURAL GAS, PETROLEUM, AND EVEN WATER; OR FOR THE DISPOSAL OF UNWANTED WASTES.

All of this places the new technology from drilling & excavating to underground testing.

There is another area in which the Government is expanding its activity as an aid to development of mineral resources - namely the Ocean.

Science and engineering are beginning to provide both understanding and tools to work in the ocean as we do on land.

The oil and gas industry is aggressively extending its activities offshore in every part of the world. They now estimate that, in the year 2000, fully 25 percent of their production will come from marine sources.

I am happy to report to you that for the first time in our history, the Congress -- through the Marine Research and Engineering Development Act of 1966 -- has established a mandate and national policy to develop marine sciences and technology.

Oceanographic council

The Act establishes a Cabinet-level Council, of which I am chairman, to examine our opportunities, to coordinate our diverse federal programs, to develop legislative proposals for the future.

Among other things, we will consider ways and means to work with industry, to share in the risks and costs, and to develop the legal framework that will provide incentive to private industry to develop marine technology.

In the United States, offshore mining is still a small business, mainly involving construction materials such as sand, gravel, and shells. But I hope that, with this new commitment to marine technology, the mining industry gets in the swim.

Now, may I mention a problem of which we are all very much aware.

Our countryside has been consumed in large gulps by exploding cities, suburbs, super highways, factories, and mines.

Metropolitan, industrial, and mine wastes have polluted rivers...automobile exhaust and stack gases have badly polluted the atmosphere in many metropolitan and industrial areas...

and junk and litter have blighted many of our roadsides.

All of us bear responsibility for this. And all of us have the opportunity to help defeat this problem.

As you know, stripped and dredged land can be reclaimed...smelter gas can be purified...and ways are now known or are being found to prevent permanent damange from other operations.

The challenge to the mining industry is not so much just to do these things -- in many cases they are already being done.

The challenge is to find ways to do it without increasing cost, or better still, ways to turn them into a profit.

This is now being done by some segments of the industry.

Making reclaimed land more useful for other purposes than it was before has more than paid for the

cost of restoring the surface of some strip mines, and recovering sulfur dioxide from smelter gas has turned a liability into a profit for some companies.

Thus far I have spoken to you as members of the industry, but I wish now to address you briefly as members of a technical society.

May I challenge you to tackle directly, and with full commitment, problems such as cost-reduction and air pollution.

The rewards for the mining industry can be continued expansion...the stability that arises from a gradually increasing market...and the improved returns that can be expected when knowledge can be substituted for risk.

Even more important can be the rewards to the nation and to the world at large.

The difference between poverty and ~~affluence~~ prosperity for a society is often the difference in its ability to substitute machines and inanimate energy for backbreaking labor.

This is the challenge which will confront you in the indefinite future. It is the challenge I am confident you will continue to meet with distinction.

# # #

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SPEECH BY

HUBERT H. HUMPHREY
VICE PRESIDENT OF THE UNITED STATES

before the

AMERICAN MINING CONGRESS

Salt Lake City, Utah, Sept. 12, 1966

I didn't come here to tell you how to run your business -- I am not a technical expert on mining. But I do come from a state that has supplied much of the iron ore for the development of the industrial economy of this great republic -- the state of Minnesota, with its fabulous open pits and deep mines.

And I will yield to no one here in awareness and appreciation of what the mining industry has done for the development and growth of America... of what it contributes... today... and of the essential part it must play in our future.

What national needs lie ahead and what demands and challenges do they present to you in the mineral industry?

I think we ought to face these questions fully and openly.

First of all, I must point out that, if we sustain a healthy economic growth in our country, our economy will need more mineral input. In the case of many minerals, you will have to find and produce, between now and 1990, two to three times as much as you already have on hand.

For many minerals, the cumulative requirement during the next quarter of a century will be larger than the total amount found and mined during all of our history.

For some minerals this growing demand may pose no problem. But for many others it presents a formidable challenge, and in a moment I want to say more about this.

But first let me mention another challenge regarding future production that puts the first one in the share: We want to meet these expanding requirements at decreasing costs.

This will be quite a task. But you have done a magnificent

job in the past of reducing real costs of both materials and energy.

I am well aware that much of our mineral supply does not come from domestic sources, and that there is a gradual trend toward increased imports.

As you know, this Administration favors liberal trade.

But of one fact there can be no doubt: A strong domestic mineral industry is essential to the security and economic welfare of the United States.

We want it to be strong because it is viable and competitive, however, and this means continuing drive and resourcefulness on the part of the industry to advance all phases of mineral technology.

This brings me to a point that I think will be of interest to this audience. I know that you have been following the progress of the Almond-Green Bill, co-sponsored by Senator Moss and other Senators.

As you know, under existing law your exploration expenses

are treated for income tax purposes as capital investment, except for a very modest amount which is allowed to be treated as normal business expenses. Under the proposed legislation, your industry would be given the alternati ve of listing as business expenses all exploration expenditures, with the recapture as capital investment of those expenditures which actually lead to mining developments. It should be a tremendous help to you. Despite the deferall of federal revenue which would result, it is good legislation and sound economic policy.

We have learned in my own state of Minnesota that the kind of tax treatment given mining can make a great difference in the size and health of the industry. I am sure that the more flexible tax treatment which I have just discussed will stimulate additional mineral exploration -- needed exploration, which will significantly increase the mineral reserves of the United States. Therefore, I repeat, the enactment of the Almond-Green Bill is timely and in the best interests of our national welfare and security.

From my own experience in Minnesota, I know about taconite and the miracles you have performed in obtaining a better and cheapter product from a material once considered too refractory to mine at all. The development of taconite has been a blessing to the economy of my state.

There are now under construction four hundred million dollars in new taconite facilities along the iron range in Northern Minnesota. This has opened up a whole new future to the state and its people.

In the next eight years, because of sensible cooperation among federal, state, and local authorities and industry, new private investment in these taconite facilities will reach a total of eight hundred million to a billion dollars. It has now only eliminated unemployment in the iron range -- it has even eliminated seasonable unemployment, because the miners now work inside. So the mining industry has brought us stability as well as progress.

Much of the credit for the development of these taconite facilities goes to the research of an old and good friend of mine, Professor E. W. Davis, who for thirty years worked on this problem at the mineral experiment station at the University of Minnesota. This good man has made a fortune for others and a great name for himself.

So I can say to this gathering today that our state of Minnesota is a happy one, because we have joined government and business together in a common cause -- lending free enterprise the helpi ng hand of a friendly and understanding government, together with the research facilities of the Bureau of Mines and the University of Minnesota.

I have been speaking so far of magnetic taconite. There are also huge reserves of non-magnetic taconite. In fact, they constitute by far the largest reserves in the Minnesota iron range. Being non-magnetic, they cannot at present be separated economically by conventional methods.

However, the Bureau of Mines is now seeking to combine non-magnetic taconite with the scrap from junked automobiles. A pilot plant is currently in operation at their laboratory in Minneapolis, where the scrap autos are chewed up with non-magnetic taconite, and roasted. In the process, the non-magnetic taconite becomes magnetic and the scrap autos are converted into high-grade iron ore. The magnetic taconite can then be processed in the manner already established. The two are then combined to feed the blast furnaces. The construction of a demonstration plant in Minnesota using this process will shortly be announced.

Last summer International Nickel Company announced an 85 million dollar underground mine for low-grade copper and nickel ores, and they estimate that there will be hundreds of millions of dollars of new investment in the next few years.

Now we are working on the complex problem of recovering both iron and manganese from the low-grade ores in the Cuyuna Range. Research is currently being conducted by the federal

government, the state of Minnesota and local government, and we are hopeful that it will result in very substantial investment in new facilities, such as we are now seeing in taconite and nickel.

I've been speaking about fairly long-range requirements for over-all mineral production, but let me mention now some individual minerals that pose problems over the shorter term.

Our commitments in Vietnam have stepped up requirements for several metals, and before I say more I want to applaud and thank the metals industries for their efforts and response in meeting these increased demands.

You have been true patriots, because extractive industries are not always profitable -- the risk is high, and there are many lean years.

No doubt many of you have questioned our efforts to hold the line on prices. But I am confident that you recognize the importance of these efforts in restraining price inflation.

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in general, are what the economists call forward multipliers -- they affect growth in a whole chain of manufacturing industries and consumer activities.

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For the first, improved production facilities and efficiencies may be the answer, but for the second the answer seems to require new discoveries and new sources of supply.

The inter-relationships in the world of technology are always surprising. As you know, I am chairman of the Space Council.

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is very close. Until very recently, the greatest single missing ingredient for successful space travel has been materials of the toughness, lightness, resistance to heat and stress required to build both practical spacecraft and the engines to power them.

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Prospecting will continue to need people on the ground. But, potentially, space-borne magnetometers, and gravity-gredient sensors can help locate bodies of ore. Special infrared and

ultraviolet detectors and other special color-sensitive photographic film can detect the telltale signs in soil and vegetation of certain kinds of mineral deposits. Orbital techniques for mapping are also under development. These will become important new tools, just as aerial surveys from planes have become widely used.

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available to you quickly through publications and press releases. We hope you will follow up their leads, and press your initiative in developing your own new approaches.

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for ore beneath the surface.

Carlin is now our second largest good producer and its reserves are estimated to be about one hundred million dollars in gold.

The day is approaching when methods of fracturing huge blocks of rock by nuclear energy will find application in the mining industry. The Geological Survey, the Bureau of Mines, and the Atomic Energy Commission are working jointly with industry in this venture. Planning for experiments in several areas is well advanced. Some of the tests include the first fracturing of tight gas formations to increase the rate of natural gas flow; breaking of low-grade copper ore for in-place leaching; fracturing of oil shale for in-place retorting; preparation of underground cavities and fractures for the storage of natural gas, petroleum, and even water -- and also for the disposal of unwanted wastes.

There is another large area in which the government is expanding its activities as an aid to the development of mineral resources -- namely the ocean.

Science and engineering are beginning to provide both understanding and tools to work in the ocean as we do on land.

The oil and gas industry is aggressively extending its activities offshore in every part of the world. They now estimate that, in the year 2000, fully 25 percent of their production will come from marine sources.

I am happy to report to you that for the first time in our history, the Congress -- through the Marine Research and Engineering Development Act of 1966 -- has established a mandate and national policy to develop marine sciences and technology.

The Act establishes a Cabinet-level Council, of which I am chairman, to examine our opportunities, to coordinate our diverse federal programs, and to develop legislative proposals for the future.

Among other things, we will consider ways and means to work with industry, to share in the risks and costs, and to develop the legal framework that will provide incentives to private

industry to develop marine technology.

In the United States, offshore mining is still a small business, mainly involving construction materials such as sand, gravel, and shells. But I hope that, with this new commitment to marine technology, the mining industry will get in the swim.

Finally, may I mention a problem of which we are all very much aware?

Our countryside has been consumed in large gulps by exploding cities, suburbs, super highways, factories, and mines.

Metropolitan, industrial, and mine wastes have polluted rivers... automobile exhaust and stack gases have badly polluted the atmosphere in many metropolitan and industrial areas... and junk and litter have blighted many of our roadsides.

All of us bear the responsibility for this. And all of us have the opportunity to help solve this problem.

As you know, stripped and dredged land can be reclaimed... smelter gas can be purified... and ways are now known, or are

being found, to prevent permanent damage from other operations.

The challenge to the mining industry is not so much just to do these things -- in many cases they are already being done.

The challenge is to find ways to do it without increasing cost -- or better still, ways to turn them into a profit.

This is now being done by some segments of the industry.

Making reclaimed land more useful for other purposes than it was before has more than paid for the cost of restoring the surface of some strip mines, and recovering sulfur dioxide from smelter gas has turned a liability into a profit for some companies.

Thus far I have spoken to you as members of the industry, but I wish now to address you briefly as members of a technical society.

May I challenge you to tackle directly, and with full commitment, problems such as cost-reduction and air pollution? There isn't any reason why man should choke to death on his own technological achievements, and we are close to doing that in some areas.

The rewards for the industry can be continued expansion... the stability that arises from a gradually increasing market... and the improved returns that can be expected when knowledge is substituted for risk.

So I come to you today not only to ask you to redouble your efforts in the field of research. I ask you to join us as partners with your government, and to urge your government to do even more -- not more to restrain you, but to unleash you, to help you in the discovery of new sources of minerals. Above all, I ask you to help in making America as beautiful as we all know it can be.

This is my first appearance at the American Mining Congress. Your industry is making a tremendous contribution to the future of America. I hope that, as a result of your deliberations this week, you in industry and we in government can march side by side, not as antagonists or protagonists, but as partners -- each tending to the business assigned to us, but always remembering that the basic strength of this country lies in its free economy.

We in government are here to supplement, not supplant -- to aid, not to dominate -- to help, not to restrain.

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[Transcript]

ORIGINAL

SPEECH BY

HUBERT H. HUMPHREY

VICE PRESIDENT OF THE UNITED STATES

before the

AMERICAN MINING CONGRESS

SALT LAKE CITY, UTAH

SEPTEMBER 12, 1966

THE TERRACE

1:30 O'CLOCK P. M.

VICE PRESIDENT HUMPHREY: Thank you, Mr. Kinnear, Mr. Weed and President Tanner, Congressman King and Congressman Gurney, and all of the officers of the American Mining Congress.

I do note that you have three vice presidents and executive vice presidents. This must be a mighty important organization. We only have one vice president down in Washington and I hope they treat you as well in the Mining Congress as they do me in the Nation's Capitol.

Secretary Moore, my good friend Eva Adams, the Director of the Mint, nice to see you again Eva. Already you have had greetings from the two Senators of the State but I would be remiss as the presiding officer of the Senate if I didn't bring you the warm greetings of both Senator Bennett and Senator Moss, two public officials that are keenly and deeply interested in the work of their Congress and indeed all the

Western States' Senators and Congressmen. I have never seen a group of people that were more devoted to their part of the great nation than these fine men.

Secretary Miller, Mrs. Humphrey and I want you to know how much we appreciate the many courtesies that are always extended to us on our visits here to Utah and particularly this beautiful and lovely city of Salt Lake City. It is a very beautiful community.

I am sure you would all like to know that the Gemini 11 is doing just fine. It has already made its contact with the Agena, the docking has taken place and it is going through its regular exercises and its scientific missions according to schedule.

I feel a little sense of personal pleasure in this since I am Chairman of the Space Council and I sort of worry through each one of these flights but Gemini 11 once again demonstrates the proficiency, the competence, the ability of American industry, American labor and this great cooperation, this tremendous teamwork that takes place between government, through NASA and the Department of Defense, our great universities, who are so fully involved in our space research and development program and our fabulous American private economy in all of its many facets. It is one of the most thrilling developments of modern times.

I couldn't help but say a little earlier today

to Mr. Overton and to Secretary Moore how excited and pleased I am and was last night and am today over the fact that the people in Viet Nam went to the polls in overwhelming numbers. I only hope that the American people who are free to go to the ballot box without threat of assassination, without terror, without all of the bitterness and the possibility of death and fire, I only hope that we will have as good a record. They estimate that approximately eighty per cent of the eligible electorate cast a ballot for a constituent assembly in Viet Nam yesterday and I wonder if we can get fifty per cent of the American people to come and cast a ballot in November for members of Congress and State and local offices. It surely would be a wonderful thing if we could and I hope that you will be as interested as those overseas.

I want to bring you the warm greetings of a very special friend, Mr. Weed, Mike Mansfield, the Majority Leader of the United States Senate and if there ever was a friend of the miners and of this industry, I speak of one and he is backed up by another friend of this industry who doesn't come from Montana but comes from a State just a little larger, Texas, the President of the United States and I bring President Lyndon Johnson's warm greetings to this Conference. (Applause).

I received a booklet from Mr. Overton about the proceedings of this Congress that overwhelmed me. I went through page after page of the summaries of the many papers

that are going to be presented by people in industry and research and science and technology. I was trying to acquaint myself a little more with the deliberations of your Conference in Congress and I can surely see that you have a work session, a very valuable one and I hope all you ladies are as interested in mining and minerals as the men are and if you are not, why I gather that you have a very good host committee that will see to it that you see many of the wonderful sights around Salt Lake City.

I am talking to people today that are plain speaking, blunt individualists. I know miners, I have met them and been with them and if there ever was a group of individualists in this country that almost equals if not surpasses the American farmer, it's the people that are in mining. They speak their minds. I think Mr. Weed or Mr. Kinnear was telling me a short time ago how many members there were on the board. He said everyone of them is an independent. Well, now, that is pretty hard for a fellow in politics to hear and I would like to know that there is some better organization than that. I suppose that none of you would be very surprised to hear me say that I am no authority on mining. I ought to confess that before I start.

I didn't come here to tell you how to run your business and I am surely not here as a technical expert but I do come from a State -- and there are many of my fellow

Minnesotans here -- that has supplied the major source and supply of iron ore for the development of the industrial economy of this great Republic and that is the State of Minnesota with its fabulous open pits, yes and deep mines of iron ore over the years and I will yield to no one in my awareness and appreciation of what the mining industry has done for the development and the growth of this great country of ours and of what it contributes today and more importantly, the essential part that this industry of mining must contribute and play in the future and it is of the future that I think we should talk.

Now all of us are rightly impressed with the achievements of the mineral industry in helping to lay the base for our national prosperity and our national strength and, my fellow Americans, don't take that prosperity and national strength for granted. Be reverently grateful, be reverently grateful because this fabulous economic and political system of ours has created a modern day miracle.

Only a few years ago no one in his wildest moment would have dared dream of a seven hundred fifty billion dollar economy and may I say from this platform today that it will only be a few years hence that we will be talking about a trillion dollar economy.

But what about that future? What national needs really lie ahead for you and what demands and challenges do

these national needs present to you with the mineral industry? I have already indicated that this is a growing country. All too many people refuse to accept that fact. I have been in public life a long time and I have had my fair share of troubles, my fair share of rewards but the most criticism I have ever received is because I sort of believe that this was a great country. I have always believed that we were going places. I have never seen an airport that was built that was large enough.

I remember one time I wrote to the Director of the Airport in Twin Cities after we dedicated our new airport and he was already being criticized for boondoggling by the practical minded men at that time. Of course, they have all since faded into oblivion where they rightly belong and I wrote to this director and I said I want to tell you one thing, you will be criticized now for having outlined and designed an airport that is far beyond the needs of the community and they will ride you out of town on a rail most likely unless you can resist and ten years from now you will be criticized because you had no vision. And I was right.

No one really can predict with certainty what this nation will mean and what it will have. The only thing I say to every one of you is whatever your estimates, update them because we are going places. We are not only going places, we know where we are going and we know what we have to do. I was

in Des Moines, Iowa, just last Friday. For twenty years we have been talking in this country about surplus agricultural commodities. I am here to announce to you there are none unless it is in tobacco and a little cotton. As I announced to some forty thousand people in that audience, we have asked the American farmer to open up his acres, to produce and to produce and to produce for an American economy, for our commercial exports and for a hungry world and we need to get our thinking cleaned in government and out of government.

We have very many people in grovernment that are still thinking in terms of the '30's and the '40's and the '50's. They haven't been able to project themselves to the '80's and the 90's.

One nice thing that I have had happen to me is as Chairman of the Space Council. We have to think about the year 1980. We have such a long lead time that if we think about today we have lost your money. The whole program is a failure. We have to think ten years in advance and calculate and hope that somehow or other we are right. We are going to need fantastic amounts of food over and beyond anything that anybody in this audience can contemplate and we are going to need that much more minerals too as you know better than I.

Now, if we are to sustain a healthy economy and if we are going to have continued economic growth and we must because the population is going to grow, the needs are here,

then we are going to need more mineral input and in the case of many minerals few in this audience today, you and your companies and your associates will have to find and produce between now and 1990 -- and that's a good target date for any of us to think about -- two to three times as much as you have already done. Just as we are going to have to double our university classroom space in the next fifteen years. We are going to have to build more college classrooms in the next fifteen years than in the last three hundred. We are going to have to build in the next twenty years more elementary school classrooms than we have in the past three hundred and to say that we can't is to say that you're dead. To say that you can is to say that are alive and I come out for life. I am not strong on that other side. I believe in living.

Now, for many minerals the cumulative requirement in the next quarter of a century will be larger than the total amount found and mined during all of our history and for some minerals this growing demand is going to pose no problem but for many others it represents a tremendous, tremendous real challenge and we need to meet these expanding requirements if America is to be a leader, if our standard of living is to be maintained, if we are going to do what our destiny calls upon us to do and we need to meet these expanding requirements at decreasing costs just as we have done in coal.

I spoke to the Coal Producers Association in

Washington not long ago and the miracle of American coal production should be a standard for everybody. There are two items that America produces cheaper than any other country in the world, food and coal and these two items have done a great deal for our balance of payments and I read in your own journal just as I came in here how Germany right now is looking for more coal, how the French, for example, have lowered some of their trade barriers to offer opportunities for more American coal.

What is it, about seventeen tons per man day average out of the American coal mines and when I heard Secretary Miller talk about the coal here, coal is not a liability, it is a growing asset in a world that needs energy. You and I know that it is nothing more than concentrated energy waiting to be released.

Now I am well aware that much of our mineral supply does not come from domestic sources and as you know we need trade, foreign trade in order to sell what we have and this administration favors a liberal competitive trade policy but of one fact there can be no doubt and I speak now for your government, a strong domestic mineral industry is essential, positively essential to the security and the economic welfare of the United States. We cannot rely on outside resources. We must rely basically upon our own and if our domestic industry is to be strong and you want it strong, this means continuing resourcefulnes

on the part of industry to advance all phases of mineral technology.

Now this brings me up to a point that I think would be of some interest to those in this audience. I know that you in the Mining Congress have been interested in the progress of the Almond-Green Bill co-sponsored by Senator Moss and other senators. I see Mrs. Almond is here today and she gave me a note from Al. Well, Al Almond did a wonderful service for the mining industry, Mrs. Almond, as has Senator Green and others, Senator Moss, oh, there are many others.

You are interested in the progress of HR-4665 as we say in the political trade concerning the tax treatment of mineral exploration expenses. I believe I had heard this mentioned here from the platform and I have talked privately to some of you and you wonder what is going to happen to it in light of the recent economic and fiscal policy decisions by your government. You have a right to be concerned of course.

Well, I talked to the White House at 12:00 o'clock. Secretary Moore and members of the Congress and others have been very interested in this and so are you and I am pleased to report to you now as of this minute that the President will sign today this important bill which can mean so much to your industry. (Applause).

Now, if I don't do anything else today just mark that down as a plus. That ought to pay for the luncheon.

(Laughter).

But I am delighted. I have been deeply concerned about this legislation but it is being signed as of this afternoon.

Now as you know under previous law for income tax purposes your exploration expenses were treated as capital investment except for a very modest amount which was allowed to be treated as normal business expenses. Now under the new bill, the new law, your industry is given the alternative of expending all expenditures toward exploration with the recapture of those expenditures which actually lead to mining development. It is a tremendous help and in spite of the deferral of federal revenue which will result, I am pleased to say that it is good legislation. It is sound economic policy and it is needed.

Now a word about my own State. I wouldn't want to come out to Utah and just hear about the wonders of this beautiful part of America without having a little local pride about the area from whence we come. We have known a bit about mining for a considerable period of years out that way and we have learned that the kind of tax treatment given mining can make a tremendous difference in the size and the health of the mining industry and if there is anyone here that can testify to that, that is Chris Beukema. We have fought many a fight over this one and tax treatment means a great deal to the mining industry and I am sure that this flexibility and taxation that

I have just discussed will stimulate additional mineral exploration, needed exploration which will significantly increase reserves of the United States. This is an important step. It is a timely step and it is in the best interests of our national security and the entire national welfare.

Now from my own experience in Minnesota I would like to draw for a moment. I know a little bit about iron ore, not much but a little and a little bit about taconite and the miracles that you in this industry have performed in obtaining a better and cheaper product from a material once considered too refractory, frankly useless, to mine at all. The development of taconite has been a blessing to the economy of my State and I think to the nation. But we are not content with just one little development. We are concentrating on the application of new techniques to low grade resources and this is being done through the cooperation of federal, state and local governments and private industry.

There is now under consideration, or I should say under construction, four hundred million dollars in new taconite facilities on the iron range in Northern Minnesota and I see the representatives of these companies right here all up and down this dais, this head table. This has provided a whole new future to a State and to a people and to what we call the range, the iron range, once the greatest producer of natural ores.

In the next eight years private investment in these taconite facilities because of sensible cooperation between federal, state and local authorities and industry, will reach between eight hundred million and a billion dollars in new investment. Now that new investment has not only eliminated unemployment in the iron range -- to show you what mining can do -- but it has done away with seasonable unemployment -- it gets cold up there in the wintertime, you know -- because the miners now work indoors and I will tell you in January and February in Minnesota you don't work up in Northern Minnesota outdoors much. There are as many now employed in January as there are in June and July. Stability as well as progress from the mining industry.

Now much of the credit for the development of these taconite facilities goes to research, goes not to just industry but to a good, dear friend that is known in your circles, Professor E. W. Ed Davis, who for thirty years worked on this matter of taconite manufacturing or processing at the mineral experiment station at the University of Minnesota. Don't you ever let me hear a miner condemn a professor. If you want to condemn him privately, do it, but hire them, they're good business for you and you know it.

This good man within his own right has made a fortune for others and a great name for himself and I looked down the table here a moment ago and I see my old friend Bob

Linney who, as I recall, if I am mistaken you can correct the record later on as we say in Congress, was your engineering man of the year about four years ago and he helped set up, working day and night, the first taconite plant for the Reserve Mining Company and I saw Bill Bryant that is here today from Reserve.

I want you to know that I am busting my buttons a little bit about these accomplishments in Minnesota. They have done great things. They are great people. We have built whole new communities and this is the empirical evidence of the theory for which I speak.

Theory doesn't mean much unless you can put it to work and I said that the future of our country in a large measure is dependent upon the new resources that you could develop and I shall never forget what an old English teacher of mine told me. He said, "When you write a theme, Mr. Humphrey, write about something you know about," and I have witnessed this with my own eyes and I can say to this great meeting here today that our State is a happy one because we have joined together in happy marriage, government and business, placing the emphasis upon free enterprise with the helping hand of a friendly and understanding government with the research facilities of the Bureau of Mines and the University of Minnesota and private industry.

I have been speaking here for a moment of what we call magnetic taconite. There are also other huge reserves

of non magnetic taconite. In fact, they constitute by far the largest reserves in the Minnesota iron range. They are unlimited. Being non magnetic, of course, this source remains untapped because it cannot be separated by conventional methods at least economically at the moment. We have huge reserves of scrap autos. I saw them, a whole field full of them as we left Santa Fe this morning, these automobile chassis graveyards. Well, they are all over the United States and we wonder what to do with them. It is becoming a major problem. Everyone would like to see the blight of this landscape removed or at least to have them behind a screen.

The Bureau of Mines is attempting to get the best of two worlds out of these scrap autos and a pilot plant project is currently in operation at the Bureau of Mines Laboratory in Minneapolis, Minnesota, and may I say now that I am out of the Senate and I did kind of work a little bit to get that placed out there, where these scrap autos are chewed up and where they are mixed with magnetic taconite and roasted, so to speak, and in the process the non magnetic taconite becomes magnetic and the scrap autos are also converted into high grade iron ore. Getting high grade iron ore on one hand and magnetic taconite on the other so that we can use it in the already established processes. The two are combined then to form feed for the blast furnaces to once again feed the hungry steel mills of the country.

An announcement is expected very shortly in a demonstration plant, again to be constructed without any effort on my part I regret to say, in Minnesota which will be the forerunner we hope of many plants which will utilize this process. We sort of feel that if it is iron ore we ought to have something to say about it, at least be in on the act.

Now the N. E. Hanna Company that is represented here today, and there are many others, my goodness, there is U. S. Steel, Ogilvie Norton and I can't think of all of them that are here, the Hanna Company, they are doing extensive work on the iron range in the conversion of semi taconite and taconite but taconite is not the only mineral that has brought new life to my home State, Northern Minnesota.

Last summer International Nickel, I believe we pronounce it "Inco," announced an eighty-five million underground mine to process low grade copper nickel and they estimate that there will be hundreds of million of dollars of new investment in the next few years. This is located about six miles south of Ely in Northeastern Minnesota on the iron range and the lease that Inco signed with the Department of Interior for federal lands was the first of its kind. So some of you that are worrying that the Department of Interior is just going to hold on to these federal lands and deny you mineral rights and exploration rights, you already have a precedent established here now that says they can be opened.

Now we are working on the complex problem of separating iron ore, manganese and sulphides. This is being done on the Cyuna Range and I saw some of my friends here today from Crosby Ironton in the northeastern or northern part of our State. Research presently is being conducted by the federal government, the State of Minnesota and local government and we are hopeful that this research will bring to us great investment in new facilities such as we are now seeing in taconite and nickel.

I think what I am trying to tell you is we haven't even scratched the surface of the possibilities of mineral development. I have been speaking about the fairly long range requirements of overall mineral production. Let me mention now just a moment some specific minerals that pose problems of a shorter term.

We have a very serious situation in Viet Nam and our commitment and involvement there is heavy and this has stepped up the requirements for several metals. Before I say more I want to personally and on behalf of a grateful government thank the metal industries, the mining people for their effort in response to meeting these increased demands. You have been true patriots and I hope that the press will record this because extractive industries are not always very profitable. You have many lean years. There is high risk and here at the time of this Vietnamese crisis we have wonderful cooperation

from you. No doubt many of you, of course, have been concerned and have questioned our efforts to hold the line on prices. That is understandable. You have to sell, the government has to buy and what is more the government has the responsibility for the entire economy but I am confident that you recognize the importance of these efforts in restraining price inflation and I see my friends here from the copper industry and I am flanked with them from Anaconda and Kennecott. I know that you have been cooperative and I wouldn't want to miss this opportunity to express and give a vote of well deserved thanks to you for your cooperation.

Now the primary metal industries and the metal industries in general are what the economists like to call forward multipliers. Now I don't want to fool you, I didn't know what that meant myself until I got into this message trying to give you something to chew on for awhile today. These forward multipliers in the economy affect growth in a whole chain of manufacturing industries and consumer activities. Favorable prices, abundant supplies of a few key raw materials may be multiplied many times in the economy as a whole and by the same token higher prices, inflated prices are also felt throughout the economy.

Now what you do, what you do in this great mining industry affects the entire American economy to a much higher degree than is the case for many other industries because you

produce basic metals and minerals and chemicals. I need not expand, I am sure, on the benefits to the mining industry itself in containing inflation for as a high consumer of machines and parts and other manufactured goods you are deeply affected by the price increases in the forward industries that you supply.

Now I sense that there are two parts to this problem and that it perhaps requires somewhat of a different solution. In one case the rate of increase in demand strains available production capacity but not the ultimate ability of the industry to meet growing demands over the long range. In the other there is a world shortage, not only in production capacity but in reserves as well. Iron, aluminum, copper and molybdenum would appear to be in that first group and gold and silver and mercury seem to be in the second category.

For the first improved production facilities and efficiencies may be the answer but for the second where there are no reserves, or at least none that we know of, the answer seems to me to require new discoveries and new sources of supply and it is to this for the remaining moments that I direct your attention.

The inter-relationships of the world of technology are so exciting and are always surprising. I told you earlier that I am chairman of the Space Council. Now the Space Council deals with you directly and indirectly. While there would seem to be an enormous gulf between the hard rock miner and the

Astronaut speeding through the limitless reaches of our outer space, the fact is that the relationship is very close. Until very recently the greatest single missile ingredient to successful space travel has been materials, metals in the main of toughness, lightness and resistance to heat and stress required to build both practical space craft and engines to power them.

Saturday afternoon I visited Los Alamos. I am not at liberty to discuss a very highly secret project. I can only tell you that one of the real problems we have in nuclear space propulsion is in minerals. We are making tremendous progress. How do you get the amount of thrust out of the fantastic amounts of heat that went into the thousands of degrees? How do you get a metal that will stand this and not erode or corrode or burn out?

So metallurgy has become a vital part of the whole Atomic Energy and Space Program. Few metals have escaped playing some role in space flight and as far as our knowledge expands and our cleverness or our scientific ability in applying materials increases, we have found we need both the old familiar metals and the more exotic and rare ones.

But the space program is more than a market for the mining industry. It's special requirements have led to the development of new uses, new castings and machine techniques which will find wide applicability as our technological

civilization progresses. The spin offs of the space industry in metals alone revolutionizes this entire industry.

I hope that many of you visited our Goddard Space Center. If you haven't you should. Whole new developments that have only a secondary importance now to space are moving into our civilian commercial life. I will just give you one little indication of what I am talking about and digress here just this moment.

We are perfecting a little isotype battery that we can put into a mechanical heart to keep your heat beating in perfect rhythm for five years without a recharge and replace it. Outer space, we have to have batteries. We are going to the Moon. We are going to be there before 1970. We are going to colonize on the Moon. We are going to Mars. I have seen the engines that we are perfecting to go to Mars. We are going to have on man space flights to Mars. We are going to put men on Mars. We have to have power. Oh, what a fantastic world that our children inherit. The things that you and I shake our heads about now, they will just hem and haw a few years from now. It will be just that simple.

We will be doing within the next year repairing in flight. We are going to be doing welding in flight, in space flight in five years. I told George Meany the other day, how are you going to organize those fellows? (Laughter). We are going to be building in outer space very shortly and we

are going to need certain kinds of metals. We are going to be building laboratories, sending up piece by piece, rendevous, put it together and it is your metals that is going to have to stand that stress and strain. This is the interesting part of the current government, this looking to the future.

Well, all of this is prospecting, this is prospecting in space and you prospect a great deal, many of you right here on earth and we are going to continue to need people on the ground but space borne magnatometers and gravity sensors can locate bodies of ore from space. We can take a better picture of Salt Lake City from one hundred miles up than we can from forty thousand feet. We can tell more by space vehicles orbiting over the earth what is in the earth than you can on the earth. With new sensitors, special infrared and ultra-violet ray detectors, special color sensitive photographic film can detect the telltale signs of soil and vegetation, of certain kinds of mineral deposits. These will become important new tools just as aerial surveys from planes have been widely used and that is for grandpa and grandma. Anybody can take an aerial survey. We have really got to think ahead.

The space program in its peaceful application is one of the ways that the federal government has stepped up its efforts to help develop exploration tools and methods and help lay the groundwork for vast new discovery and exploration. Beginning this year the Geological Survey and the Bureau of

Mines have been authorized to greatly expand their efforts in research on the ore controls and habits of heavy metals. Whoever thought heavy metals had habits. I hope they are good ones. On exploration tools and methods, on geological mapping and the improved methods of mining and recovery.

Now our purpose is not for the government to directly enter into the fields of exploration and mining but to help to find favorable ground for industry to explore and to improve the technology of exploration and production so that you can use that tax incentive that I just told you the President was going to sign in order to help industry tackle more difficult problems at lower cost. The surveys in the Bureau's results will be made available to you quickly through publications and the press.

Now there is good reason to believe that advanced exploration science and extraction technology will yield important discoveries and increase production of heavy metals even for the precious metals that have been sought so intensively through man's history.

The important gold discovery of Carlin, Nevada, came as a result of an imaginative follow-up on the part of industry, of equal imaginative geologic mapping and analysis on the part of the Geological Survey. As I understand it not only is there no trace of the ore at the surface in Carlin but the ore-bearing rocks and structures have no surface indication

either. The old sourdoughs, as good as they were would have missed it and they did miss it. They couldn't have touched it but Carlin is now our second largest gold producer and its reserves are estimated to be about one hundred million dollars in gold.

Now the day is approaching when technology for fracturing vast blocks of rock by nuclear devices will find application in the mineral industry. I want to say to my friends the press paging through what they thought were my remarks, that after I was up at Los Alamos I did a little more writing. I got a chance to see what was going on and when you go to those Nevada underground Atomic Test sites, when you go in to see what goes on in Jackass Flat and a few other places and see the kind of machines that we are using to bore into the earth and create literally rooms and vestibules. Technology that has been developed out of this underground Atomic Testing is unbelievable in its potentially good application for this industry. All in the name of Atomic Energy but really it applies directly to mining.

The Geological Survey, the Bureau of Mines, the Atomic Energy Commission are working jointly with industry in designing experiments for using this new technology of fracturing vast blocks of rock by nuclear devices. Planning for experiments in several areas is well advanced and some of the tests included our first fracturing of tight gas formations to increase

the rate of natural gas flow; breaking of the low grade copper ore for in place leaching; fracturing of oil shale for in place retorting; preparation of underground cavities and fractures for storage of natural gas, petroleum and even water and for the disposal of unwanted wastes so that instead of wondering how you are going to dispose of the wastes on top of the earth, you use a nuclear device to clean out a whole chasm under the earth and that is what you use for storage for days yet to come.

I have never been very worried that we wouldn't have answers to our problems. Sometimes I worry that some people might run out of problems. We can find these answers. Science and technology knows no limits. Miracles are being performed every day.

I was once asked what is my favorite passage of Scripture and, President Tanner, I hope that you will permit me in all reverence to say it here, when the Lord said, "Greater things than I have done ye shall do also." We are doing it. We are doing these things. Putting hearts into people, transfer of organs. We are bringing people literally back to life. We are dissecting the neutron and the proton and the nucleii. We are beginning to find out about cellular structure and life itself, even creating synthetic life. Tremendous possibilities.

So that mining and a mining congress is no longer just men looking for materials, minerals. It is a whole big what I would call inter-disciplines. The inter-disciplines of

technology and science and metallurgy and chemistry and mining, all sorts of things taking place and this is the whole secret of modern education that our young people are getting today.

The oil and gas industry has made such advances and this I give to you, there is another area in which your government is expanding its activities as an aid to the development of mineral resources, oceanography. The ocean, the ocean. Three-fifths of the surface of the earch is water and we have been going around thinking it was just to sail on and swim in. How foolish can men be? I think Divine Providence had greater uses for the ocean than just to take a bath or out of which to get fish. Science and engineering are beginning to provide both understanding tools to work in the ocean just as we do on the land. The oil and gas industry is aggressively extending its activities off shore in every part of the world.

They now estimate that in the year 2000 and that is just around the corner, fully twenty-five per cent of all oil and gas production on the face of this earth will come from under the seas from marine sources. I predict that is a low estimate from what little I have learned already.

I am happy to report to you that for the first time in our history the Congress and the Executive Branch through the Marine Research and Engineering Development Act of 1966, signed just two months ago, has established a mandate and a national policy to develop marine sciences, resources and

technology. The Act establishes a cabinet level council known as the Council on Marine Resources, Engineering and Development. It is the Council on Oceanography and the Vice President was made chairman of it. It seems like whenever they have got an assignment out of this world or under the seas they give it to the Vice President. (Laughter).

The Space Council and Oceanography, but I have been so excited about it. I have been meeting with many of your people right here in this room and the possibilities are unlimited to examine our opportunities, to coordinate our diverse programs, public and private, for a long range proposal for the future.

Now we are going to consider ways and means to work with industry, to share in the risks and the costs and the development of the legal framework that will provide incentive to private industry to develop marine technology. In the United States offshore mining is still a small business mainly involving construction materials such as sand, gravel and shells but I hope that with this new commitment to marine technology and oceanography, the mining industry gets into the swim and I make a prediction, we will get a substantial amount of our minerals from the beds of the seas and not any longer from just the mountains and the hills and valleys of the dry lands.

Now may I mention a problem as I conclude that will be of some interest to you. Our countryside has been

consumed in large gulps by exploding cities and suburbs and super highways and factories and mines. Metropolitan and industrial and mine wastes have polluted our rivers. Automobile exhaust and stacked gasses have badly polluted the atmosphere in many metropolitan and industrial areas. I know that one of these days this will be taken care of by maybe other forms of energy but for a long period of time we are faced with this problem of air and water pollution. The junk and litter have blighted many of our roadsides. I hope that America doesn't have a page in history 2000 years ago that this was the land of the beer can and I must say that when I go along the highways it appears to me that people have made a special, sort of special game out of seeing how many of these little capsules they can toss out. This isn't the way that you make America beautiful. It just simply proves that you don't know where the garbage can is and if you don't know that you are not very smart.

I appeal to us to do something about that. Beautification isn't just in your own home, it is on public property too. Now all of us bear some responsibility for our land and all of us have an opportunity to help defeat this problem of pollution. As you know stripped and dredged land can be reclaimed. Smelter gas can be purified and ways are known and are being known and found to prevent permanent damage from other operations.

So the challenge to the mining industry is not

so much just to do these things, in many cases they are already being done. The challenge is to find ways to do these things without increasing costs and better still to have ways to turn them into a profit. Just like the packing houses learned how to turn into a profit what they thought was waste twenty-five years ago and now it has become a delicacy and you are eating a lot of it and we used to throw it out right in South St. Paul into the river and we are charging you good prices for it now and you say, "Um um, it is so good".

This is being done, this changing wastes into profit in some segments of industry. Making reclaimed land more useful for other purposes than it was before has more than been paying for the cost of restoring the surface of some strip mines and recovering sulfur dioxide from smelter gas has turned a liability into a profit for some companies.

So may I ask you and challenge you to tackle directly and with full national commitment problems such as cost reduction and air pollution. There isn't any reason that man should choke to death on his own achievements and we are close to doing it in some areas.

The rewards of the mining industry can be continued, continued expansion, the stability that arises from a gradually increasing market and the improved returns that can be expected when knowledge can be substituted for risk. So I come to you today to not only ask you to redouble your efforts

of what appeared to be sensible commercial pursuits but to redouble your commitments in the field of research, to join as a partner with your government and ask your government to even do more. Not to do more to restrain you but to unlease you, to get you into the business of a discovery of new sources of energies,new sources of minerals, new sources of chemicals, new sources of raw materials and above all I ask you to help us make America the Beautiful and we can.

Ladies and gentlemen, I have been very privileges to be invited to this meeting. This is my first appearance at the American Mining Congress. I am convinced that this great industry represents a tremendous bulwark of strength for the future of America and I only hope that as a result of these deliberations this week that those of you in industry and those of us in government can march side by side not as competitors, not as antagonists or protagonists but as partners, each tending to the business assigned to us but always remembering that the basic strength of this nation is in its free economy. That Government is here to supplement, not to supplant, to aid and not to dominate, to help and not to restrain. That will be the policy which your government will pursue.

I bring you that message today. Thank you.

(Applause)

(Thereupon the speech was concluded at 2:20 o'clock P. M.)

C E R T I F I C A T E

I, Alan H. Jenkinson, hereby certify that I am a duly licensed Certified Shothand Reporter in and for the State of Utah; that on the 12th day of September, 1966, I reported the Speech by Vice President of the United States Hubert H. Humphrey, at The Terrace, Salt Lake City, Utah; that thereafter the said shorthand notes were reduced to typewriting, and that the preceding pages numbered from 1 to 30, inclusive, are to the best of my ability a full, true and correct transcript of said Speech.

Dated at Salt Lake City, Utah, this 14th day of September, 1966.

Alan H. Jenkinson

ALAN H. JENKINSON, C. S. R.
837 BOSTON BUILDING
SALT LAKE CITY, UTAH

Address by

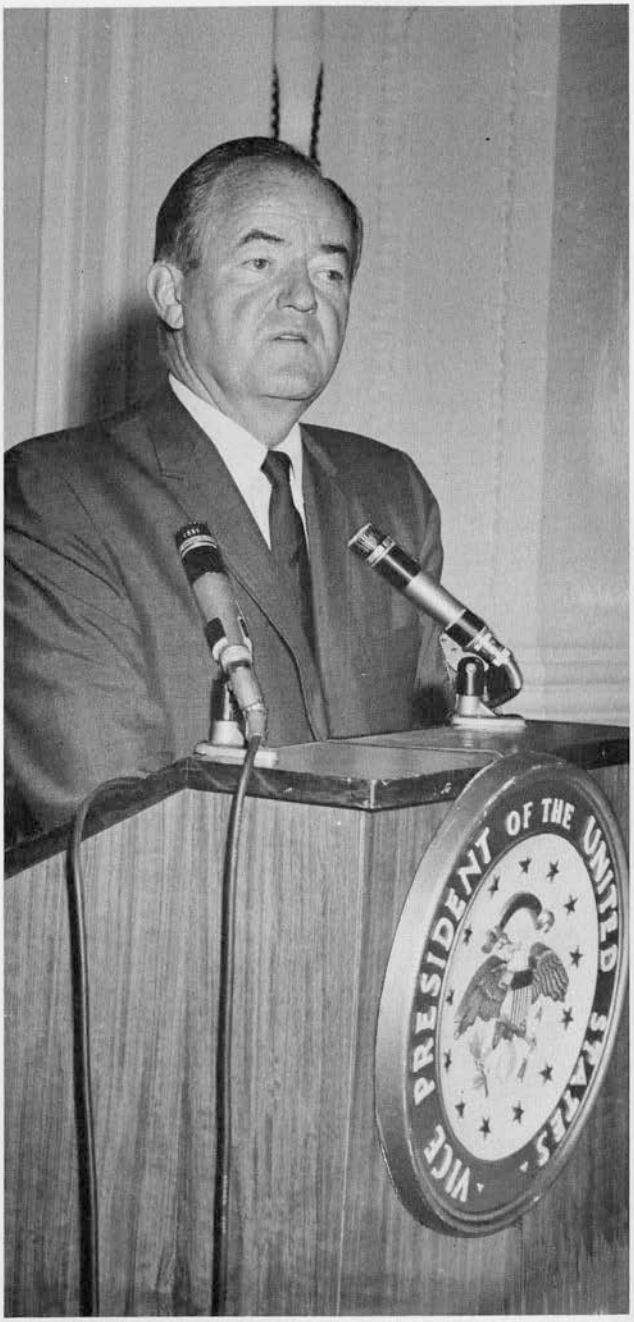
HUBERT H. HUMPHREY

VICE PRESIDENT OF THE UNITED STATES

before the

AMERICAN MINING CONGRESS

SALT LAKE CITY, UTAH
SEPTEMBER 12, 1966



Additional copies of the Vice President's address may be obtained from the American Mining Congress, 1100 Ring Building, Washington, D. C. 20036

Address by

HUBERT H. HUMPHREY

VICE PRESIDENT OF THE UNITED STATES

before the

AMERICAN MINING CONGRESS

Salt Lake City, Utah, Sept. 12, 1966

I didn't come here to tell you how to run your business – I am not a technical expert on mining. But I do come from a state that has supplied much of the iron ore for the development of the industrial economy of this great republic – the state of Minnesota, with its fabulous open pits and deep mines.

And I will yield to no one here in awareness and appreciation of what the mining industry has done for the development and growth of America . . . of what it contributes . . . today . . . and of the essential part it must play in our future.

What national needs lie ahead and what demands and challenges do they present to you in the mineral industry?

I think we ought to face these questions fully and openly.

First of all, I must point out that, if we sustain a healthy economic growth in our country, our economy will need more mineral input. In the case of many minerals, you will have to find and produce, between now and 1990, two to three times as much as you already have on hand.

For many minerals, the cumulative requirement during the next quarter of a century will be larger than the total amount found and mined during all of our history.

For some minerals this growing demand may pose no problem. But for many others it presents a formidable challenge, and in a moment I want to say more about this.

But first let me mention another challenge regarding future production that

puts the first one in the share: We want to meet these expanding requirements at decreasing costs.

This will be quite a task. But you have done a magnificent job in the past of reducing real costs of both materials and energy.

I am well aware that much of our mineral supply does not come from domestic sources, and that there is a gradual trend toward increased imports.

As you know, this Administration favors liberal trade.

But of one fact there can be no doubt: A strong domestic mineral industry is essential to the security and economic welfare of the United States.

We want it to be strong because it is viable and competitive, however, and this means continuing drive and resourcefulness on the part of the industry to advance all phases of mineral technology.

This brings me to a point that I think will be of interest to this audience. I know that you have been following the progress of the Almond-Green Bill, cosponsored by Senator Moss and other Senators.

As you know, under existing law your exploration expenses are treated for income tax purposes as capital investment, except for a very modest amount which is allowed to be treated as normal business expenses. Under the proposed legislation, your industry would be given the alternative of listing as business expenses all exploration expenditures, with the recapture as capital investment of those expenditures which actually lead to mining developments. It should be a tremendous help to you. Despite the deferral of federal revenue which would result, it is good legislation and sound economic policy.

We have learned in my own state of Minnesota that the kind of tax treatment given mining can make a great difference in the size and health of the industry. I

am sure that the more flexible tax treatment which I have just discussed will stimulate additional mineral exploration – needed exploration, which will significantly increase the mineral reserves of the United States. Therefore, I repeat, the enactment of the Almond-Green Bill is timely and in the best interests of our national welfare and security.

From my own experience in Minnesota, I know about taconite and the miracles you have performed in obtaining a better and cheaper product from a material once considered too refractory to mine at all. The development of taconite has been a blessing to the economy of my state.

There are now under construction four hundred million dollars in new taconite facilities along the iron range in Northern Minnesota. This has opened up a whole new future to the state and its people.

In the next eight years, because of sensible cooperation among federal, state, and local authorities and industry, new private investment in these taconite facilities will reach a total of eight hundred million to a billion dollars. It has not only eliminated unemployment in the iron range – it has even eliminated seasonable unemployment, because the miners now work inside. So the mining industry has brought us stability as well as progress.

Much of the credit for the development of these taconite facilities goes to the research of an old and good friend of mine, Professor E. W. Davis, who for thirty years worked on this problem at the mineral experiment station at the University of Minnesota. This good man has made a fortune for others and a great name for himself.

So I can say to this gathering today that our state of Minnesota is a happy one, because we have joined government and business together in a common cause – lending free enterprise the helping hand of a friendly and understanding government, together with the research

facilities of the Bureau of Mines and the University of Minnesota.

I have been speaking so far of magnetic taconite. There are also huge reserves of non-magnetic taconite. In fact, they constitute by far the largest reserves in the Minnesota iron range. Being non-magnetic, they cannot at present be separated economically by conventional methods.

However, the Bureau of Mines is now seeking to combine non-magnetic taconite with the scrap from junked automobiles. A pilot plant is currently in operation at their laboratory in Minneapolis, where the scrap autos are chewed up with non-magnetic taconite, and roasted. In the process, the non-magnetic taconite becomes magnetic and the scrap autos are converted into high-grade iron ore. The magnetic taconite can then be processed in the manner already established. The two are then combined to feed the blast furnaces. The construction of a demonstration plant in Minnesota using this process will shortly be announced.

Last summer International Nickel Company announced an 85 million dollar underground mine for low-grade copper and nickel ores, and they estimate that there will be hundreds of millions of dollars of new investment in the next few years.

Now we are working on the complex problem of recovering both iron and manganese from the low-grade ores in the Cuyuna Range. Research is currently being conducted by the federal government, the state of Minnesota and local government, and we are hopeful that it will result in very substantial investment in new facilities, such as we are now seeing in taconite and nickel.

I've been speaking about fairly long-range requirements for over-all mineral production, but let me mention now some individual minerals that pose problems over the shorter term.

Our commitments in Vietnam have stepped up requirements for several metals, and before I say more I want to applaud and thank the metals industries for their efforts and response in meeting these increased demands.

You have been true patriots, because extractive industries are not always profitable—the risk is high, and there are many lean years.

No doubt many of you have questioned our efforts to hold the line on prices. But I am confident that you recognize the importance of these efforts in restraining price inflation.

The primary metal industries, and the mineral industries in general, are what the economists call forward multipliers—they affect growth in a whole chain of manufacturing industries and consumer activities.

Favorable prices and abundant supplies of key raw materials may be multiplied many times in the economy as a whole, and by the same token higher prices are also felt throughout the economy.

Therefore, what you do affects the entire economy to a much higher degree than is the case for many other industries.

And I need not expand, I am sure, on the benefits to the mining industry itself of containing inflation, for—as a high consumer of machines and other manufactured goods—you are deeply affected by price increases in the industries that you supply.

The problem of tight supplies in both the domestic and world market is particularly critical for the heavy metals in general, including mercury, silver, gold, and others.

How to solve these tight-market problems, and help stave off inflation, is the challenge facing you and your government.

I sense that there are two parts to the problem that perhaps require somewhat different solutions.

In one case, the rate of increase in demand strains available production capacity, but not the ultimate ability of the industry to meet growing demands over the longer range.

In the other, there is a world shortage not only in production capacity but in reserves as well.

Iron, aluminum, copper, and molybdenum would appear to belong to the first group, and gold, silver, and mercury seem to fit the second category.

For the first, improved production facilities and efficiencies may be the answer, but for the second the answer seems to require new discoveries and new sources of supply.

The inter-relationships in the world of technology are always surprising. As you know, I am chairman of the Space Council.

While there would seem to be an enormous gulf between the hard-rock miner and the astronaut speeding through the limitless reaches of outer space, the fact is that their relationship is very close. Until very recently, the greatest single missing ingredient for successful space travel has been materials of the toughness, lightness, resistance to heat and stress required to build both practical spacecraft and the engines to power them.

Few metals have escaped playing some role in space flight, for as our knowledge expands and our ingenuity in applying materials increases, we have found we need both the familiar metals and also the more exotic, rarer ones.

But the space program is more than a market for the mining industry. Its special requirements have led to the development of new uses and new casting and machining techniques which will find wide applicability as our technological civilization progresses.

Not only does the space program use metals, but it can also help in discovering them.

Prospecting will continue to need people on the ground. But, potentially, space-borne magnetometers, and gravity-gradient sensors can help locate bodies of ore. Special infrared and ultraviolet detectors and other special color-sensitive photographic film can detect the telltale signs in soil and vegetation of certain kinds of mineral deposits. Orbital techniques for mapping are also under development. These will become important new tools, just as aerial surveys from planes have become widely used.

The space program is one of the ways the federal government has stepped up its efforts to help develop exploration tools and methods, and help lay the groundwork for exploration.

Beginning this year, the Geological Survey and the Bureau of Mines have been authorized to greatly expand their efforts in research on the ore controls and habits of the heavy metals, on exploration tools and methods, on geologic mapping, and on improved methods of mining and recovery.

Our purpose is not for the government to directly enter the fields of exploration and mining but to help define favorable ground for industry to explore, and to improve the technology of exploration and production to help industry tackle more difficult problems at lower cost. The Survey's and the Bureau's results will be made available to you quickly through publications and press releases. We hope you will follow up their leads, and press your initiative in developing your own new approaches.

There is good reason to believe that advanced exploration science and extraction technology will yield important discoveries and increased production of heavy metals, even for the precious metals that have been sought so intensively throughout man's history.

The important gold discovery at Carlin, Nevada, came as a result of imaginative follow-up on the part of industry of

equally imaginative geologic mapping and analysis on the part of the Geological Survey.

As I understand it, not only is there no trace of the ore at the surface at Carlin, but the ore-bearing rocks and structures have no surface indication either. The old sourdoughs literally left no stone unturned in their examination of the surface, but they did not have the methods to see into the ground and probe for ore beneath the surface.

Carlin is now our second largest gold producer and its reserves are estimated to be about one hundred million dollars in gold.

The day is approaching when methods of fracturing huge blocks of rock by nuclear energy will find application in the mining industry. The Geological Survey, the Bureau of Mines, and the Atomic Energy Commission are working jointly with industry in this venture. Planning for experiments in several areas is well advanced. Some of the tests include the first fracturing of tight gas formations to increase the rate of natural gas flow; breaking of low-grade copper ore for in-place leaching; fracturing of oil shale for in-place retorting; preparation of underground cavities and fractures for the storage of natural gas, petroleum, and even water—and also for the disposal of unwanted wastes.

There is another large area in which the government is expanding its activities as an aid to the development of mineral resources—namely the ocean.

Science and engineering are beginning to provide both understanding and tools to work in the ocean as we do on land.

The oil and gas industry is aggressively extending its activities offshore in every part of the world. They now estimate that, in the year 2000, fully 25 percent of their production will come from marine sources.

I am happy to report to you that for the first time in our history, the Congress—

through the Marine Research and Engineering Development Act of 1966—has established a mandate and national policy to develop marine sciences and technology.

The Act establishes a Cabinet-level Council, of which I am chairman, to examine our opportunities, to coordinate our diverse federal programs, and to develop legislative proposals for the future.

Among other things, we will consider ways and means to work with industry, to share in the risks and costs, and to develop the legal framework that will provide incentives to private industry to develop marine technology.

In the United States, offshore mining is still a small business, mainly involving construction materials such as sand, gravel, and shells. But I hope that, with this new commitment to marine technology, the mining industry will get in the swim.

Finally, may I mention a problem of which we are all very much aware?

Our countryside has been consumed in large gulps by exploding cities, suburbs, super highways, factories, and mines.

Metropolitan, industrial and mine wastes have polluted rivers . . . automobile exhaust and stack gases have badly polluted the atmosphere in many metropolitan and industrial areas . . . and junk and litter have blighted many of our roadsides.

All of us bear the responsibility for this. And all of us have the opportunity to help solve this problem.

As you know, stripped and dredged land can be reclaimed . . . smelter gas can be purified . . . and ways are now known, or are being found, to prevent permanent damage from other operations.

The challenge of the mining industry is not so much just to do these things—in many cases they are already being done.

The challenge is to find ways to do it without increasing cost – or better still, ways to turn them into a profit.

This is now being done by some segments of the industry.

Making reclaimed land more useful for other purposes than it was before has more than paid for the cost of restoring the surface of some strip mines, and recovering sulfur dioxide from smelter gas has turned a liability into a profit for some companies.

Thus far I have spoken to you as members of the industry, but I wish now to address you briefly as members of a technical society.

May I challenge you to tackle directly, and with full commitment, problems such as cost-reduction and air pollution? There isn't any reason why man should choke to death on his own technological achievements, and we are close to doing that in some areas.

The rewards for the industry can be continued expansion . . . the stability that arises from a gradually increasing market . . . and the improved returns that can be expected when knowledge is substituted for risk.

So I come to you today not only to ask you to redouble your efforts in the field of research. I ask you to join us as partners with your government, and to urge your government to do even more—not more to restrain you, but to unleash you, to help you in the discovery of new sources of minerals. Above all, I ask you to help in making America as beautiful as we all know it can be.

This is my first appearance at the American Mining Congress. Your industry is making a tremendous contribution to the future of America. I hope that, as a result of your deliberations this week, you in industry and we in government can march side by side, not as antagonists or protagonists, but as partners—each tending to the business assigned to us, but always remembering that the basic strength of this country lies in its free economy. We in government are here to supplement, not supplant—to aid, not to dominate—to help, not to restrain.

COPY

PRESS CONFERENCE

VICE PRESIDENT OF THE UNITED STATES

HUBERT H. HUMPHREY

* * * * * *

SALT LAKE CITY, UTAH

SEPTEMBER 12, 1966

LAFAYETTE BALLROOM

9:10 O'CLOCK A. M.

WHEREUPON, the following proceedings were had:

REPRESENTATIVE DAVID S. KING: Ladies and Gentlemen, I know you have come here for just one purpose so the Vice President suggested that I introduce him, which is very easily done.

Utah is deeply honored to be host to him today at this non political visit but of course you have many questions to ask and I am sure many of them will pertain to political subjects so the field is open. It is with great honor and pride that I introduce the Vice President of the United States, Hubert H. Humphrey. (Applause).

VICE PRESIDENT HUMPHREY: Generally when I come to a press conference I see men who represent more the theoral subjects than you do, people that are asking all sorts of political questions rather than these badges that indicate that

they are with heavy metals, less than heavy metals, but the best way it seems to me to proceed, if it is agreeable with you, is to just make myself available for whatever questions you would like to ask and I shall attempt to give you an answer.

Yes, sir, the gentleman here on my left. Please identify yourself for me.

QUESTION: Phil Keefer of the Associated Press. Mr. Vice President, what would the administration do if the major domestic producers increased the price of copper and, two, would the administration go along with letting the copper industry retain the seven per cent tax investment credit in order to improve their production?

VICE PRESIDENT HUMPHREY: I don't know. I do not come here as an expert on copper or metals. We have members from the Department of Interior that would be more than happy to answer that question. You know, of course, that the administration is deeply concerned over inflationary pressures and I address myself somewhat in my prepared remarks to that.

I have often felt that it was a bit risky for one even outside of public life to answer iffy questions. It is much better if you would answer the question on the basis of hard fact rather than if somebody does this and if somebody does that and I say this most respectfully because these are all very sensitive subjects and I don't think that an off the

cuff answer as to what would be done if certain things happened will be of any particular help.

The general position of the administration is pretty well known and well known by the industry and the industry has been most cooperative. In fact, we are very appreciative of the spirit of cooperation which has come from industry in recognition of the many problems that the mining industry has had over the years, well, with low prices and with at times inadequate markets and high costs. Therefore all of that is taken into consideration when you design an economic policy relating to the current situation.

QUESTION: Mr. Vice President, Jim Pappas of United Press.

Could you give us your observations on the South Vietnamese elections and what you feel they portend for the American war effort in that country and the possibilities of peace and a successful conclusion of the fighting there?

VICE PRESIDENT HUMPHREY: That is a big order. I shall attempt to respond specifically.

The turn out for the elections was very gratifying and pleasing to all of the free nations and particularly the United States because of our heavy commitment in Viet Nam. I have felt and had said prior to the election that I thought there would be a big vote despite the terrorism of the Viet Cong and the threat of terrorism. We are not quite sure just

what the percentage of that vote is because in the immediate tabulation there is the possibility of some duplication but the vote is large. It is well over the fifty percent. The claims this morning are eighty to eighty-one per cent. It will be very substantial.

Now, what does this mean? This means that the first step in free government, democratic government, in South Viet Nam has been taken. That is the election of the constituent assembly for the express purpose of writing the constitution, number one, and, two of proscribing or prescribing an election law for the election of members of their parliament and of their president of whatever form of government they ultimately design in their constitution. I want to make it clear that their constituent assembly has two functions, to write the constitution and to prepare or write the election laws for the election of the governing body of a country, South Viet Nam.

The communists were quite obviously concerned about this election and that concern itself indicates some of its importance. A year ago May you may recall there were elections at the provincial and municipal leval and those elections were well supported. There was a large turn out. The communists then, the Viet Cong, did not try to interfere. This election the Viet Cong made it its primary objective to interfere. They said they wanted to crush and to smash the election.

They threatened voters with assassination. There were 132, I believe, incidents of terror that injured persons or property.

Now what does this all mean for the United States and for the free world countries involved in Viet Nam? I think this is a psychological boost and we are there not merely in a military effort but in a nation building effort. Essentially our objective in Viet Nam is nation building and the writing of the constitution is a nation building first step. It will have a tendency to strengthen the resolve of the South Vietnamese, this election. It surely does strengthen the present government in terms of the prosecution of the war and it ought to be very, very encouraging to the people of the United States.

QUESTION: Mr. Vice President, Wes Vernon, KSL News.

The former Vice President, Mr. Nixon, has made the suggestion that the administration cut off all aid to nations that trade with North Viet Nam and I am just wondering, sir, if to your knowledge the administration is giving even the slightest consideration to this possibility and if you are able to say what you personally think of the idea?

VICE PRESIDENT HUMPHREY: I do not know of any aid that is being given to North Viet Nam by any friendly nation of the United States. The aid to North Viet Nam that is of any significance at all comes from the communist bloc nations

primarily, the Soviet Union, from Communist China and from some of the eastern European communist socialist countries. There has been some shipping in the past but that is at a minimum and because of the belief of this country in freedom of the seas to which we attach a great deal of importance, we have been hesitant to put a firm band by law upon shipping to North Viet Nam. However, we have used our persuasive powers and we have used other diplomatic powers and techniques to ask our allies and the non committed countries to cease their shipping.

If my memory serves me correctly there hasn't been any free world shipping of any importance at all in the Port of Haiphong for several weeks. All the oil today for example is coming in Soviet Union carriers or over the rail from Communist China.

Mr. Nixon, I think, is making a political point and not making a very valuable contribution by his suggestion for the war effort.

QUESTION: Mr. Vice President, Michael West, the Mining Journal, London.

Would you comment on the United States Government's attitude to the growing significance of the UNCTAD organization in the pricing of international minerals and commodities?

VICE PRESIDENT HUMPHREY: I do not claim to be

an expert in this matter again but we are primarily concerned as you know with GAT and general agreements on trade and tariff and try to follow the basic formula and policy set down under GAT. We have as yet not taken a firm position on the matter of commodity stabilization, that is prices of both food and fiber and material and minerals under UNCTAD. I think it would be premature for me to say that we have a firm position except that we are in a consultative position with them and recognizing the importance of price stability and a fair price, may I add, for the raw material producing countries and for raw materials as such.

We have concentrated most of our attention on this matter in this hemisphere where in a recent conference for example in Panama we were faced with the request of Latin American Countries to have commodity stabilization programs in all of the raw material commodities produced in the Latin American Countries. Now we did not embrace that as a firm position but we did embrace it, however, as an objective to which we are willing to lend a good deal of our effort and that is about where we stand on the matter of minerals.

QUESTION: Don Woodward with the Deseret News in Salt Lake.

Mr. Vice President, a great deal of pressure has been put on for a tax increase prior to elections. Would you give us the administration's thinking on a possible increase in

taxes either before or after elections?

VICE PRESIDENT HUMPHREY: I believe that the President has made his position very clear on this. He said that he would do whatever he felt was necessary in light of the developments within the economy and his recent economic measure to Congress, fiscal measure, in reference to accelerated depreciation, to the suspension of the investment tax credit and other matters, indicates that steps will be taken as we think are needed.

This is a very sensitive economy and you have to be very careful that you do not overdose, so to speak in your curative prescription. Therefore, the administration, particularly the President, who is responsible for the administration, consults within the government the Council of Economic Advisors, our technicians and outside of the government a good deal to make sure that whatever steps we take are steps that are really needed and not steps that merely respond to momentary pressure or what some people -- what I would call sort of self medication.

Therefore, we are not at this stage proposing -- at this particular time proposing a major tax increase. We hope that the measures that have been taken thus far will tend to keep the economy in balance.

May I just say one other word about this economy so that my position on it will be quite clear to you. This is

a healthy economy. The American economy is not sick. The American economy is not weak. It is a strong economy, it is a healthy economy, it is a growing economy. Price inflation is not out of hand. There has been less price inflation from 1961 to '66 than there was from '56 to '61. The cost of living index has gone up one percentage point less in the five years from '61 to '66 than from '56 to '61 and if you compare what has happened to prices on raw materials, finished products, agricultural commodities processed in raw, in the Vietnamese period, in the period of the struggle in Viet Nam as compared to Korea, there isn't any comparison. There was a tremendous increase in the Korean period and we sustained that very well in our national economy. There has been a much less and a very much less increase under the present situation.

Now there is a difference, however. The economy is running at a higher velocity now than it was then at the beginning of the Korean war and therefore increases in price and wages in the present situation have a tendency to have a more immediate impact upon the economy than they did, let's say, fifteen years ago. But I repeat, this man that is speaking to you, the Vice President of the United States, says for this administration the economy is strong, wages are good, profits are high, dividends are good, farm prices are up. We have some signs that tell us that we should be on guard and those signs are the high rate of capital investment, a few price rises of

significance in limited areas and in the cost of living index. That was in food, medical care and interest. We are more concerned over the high rate of interest than almost any other single factor of the economy.

MR. DON WOODWARD: Sir, one further question.

Do you expect this to be a significance factor in the elections this fall?

VICE PRESIDENT HUMPHREY: I would think that in the elections this fall that the American people will at the time pretty well judge the administration insofar as the economic issue is concerned on the basis of do I have a job? Is it a well paid job? If I am a farmer, do I have a crop? Am I getting a fair price for it? If I am a businessman, am I in business? Am I making a profit? Is my plant being used to reasonable capacity? And on the basis of those criteria I would think that the Johnson-Humphrey administration ought to do quite well.

QUESTION: Mr. Vice President, M. L. Christensen, Editor of the Daily Herald in Provo.

Our national debt of course continues to soar through peacetime and wartime and through prosperity and recession and also through the administrations of both Republicans and Democrats. Neither party has the talent, it seems like, on that score. Now do you see any hope in the foreseeable future of reversing this trend and starting to pay off some of the debt?

VICE PRESIDENT HUMPHREY: I do. We had a treasury deficit this year of -- what is it -- 2.3 billion this last fiscal year, which was one of the lowest that we have had since the early 1950's and much lower than we had in the immediate preceding years. Had it not have been for the necessity of our greater involvement and commitment to Viet Nam we would have had a very substantial treasury surplus. That surplus would have bordered around eight billion dollars. If this war in Viet Nam can be de-escalated, which is our hope or if a negotiated peace could be brought about which is our objective, our economy will generate under current tax rates approximately nine billion dollars a year additional revenue each year, and with a cut back in Viet Nam spending, with the new revenue that would come from a healthy economy, we should be able to not only have a balanced budget, sir, but to make substantial payment on the debt and also to take care of some much needed domestic improvements relating, for example, to our cities, improvement of our transportation so that we thought that we might really be at that point, sir, that you have expressed the hope for.

However developments did take place in Southeast Asia, which we thought necessitated further commitment by this country and we are trying our level best to keep those commitments within the bounds of both sound national security policy and sound fiscal policy. Thank you.

(Thereupon the Press Conference ended at 9:35 A.M.)

C E R T I F I C A T E

I, Alan H. Jenkinson, hereby certify that I am a duly licensed Certified Shorthand Reporter in and for the State of Utah; that on the 12th day of September, 1966, I reported the Press Conference of Vice President of the United States Hubert H. Humphrey, at the Lafayette Ballroom, Salt Lake City, Utah; that thereafter the said shorthand notes were reduced to typewriting, and that the preceding pages numbered from 1 to 11, inclusive, are to the best of my ability a full, true and correct transcript of said Press Conference.

Dated at Salt Lake City, Utah, this 14th day of September, 1966.

Alan H. Jenkinson

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