HB
872

STATE
of ALASKA

MEMORANDUM

DEPARTMENT OF NATURAL RESOURCES
Division of Oil and Gas

TO: Guy R. Martin
Commissioner

DATE: April 16, 1976

FROM: O. K . Gilbreth, Jr.
Director

SUBJECT: Review of House Bill 872

The following will supplement information furnished by Hoyle Hamilton's letter through me to you of March 31, 1976 on the subject bill. There are some points that Hoyle failed to cover that I feel should be brought out in more detail and are discussed as follows:

Section 38.05.180 (a) on line 15 states "on the basis of a cash bonus bid with a royalty reserved to the State of 12 1/2%". This should read "with a minimum royalty reserved for the State of 12 1/2%." There should be enough latitude to allow the Commissioner to provide for a royalty of 16 2/3% or 20% or 25% if he so desires. But it should set the floor. Our last lease sales have provided for royalties above the 12 1/2% figure on a cash bonus bid type sale.

Section 38.05.180(a) (2) provides for a cash bonus bid with a share of the net profit. In subsection (b) of the same section there is an attempt to define what the net profit share will be and certain criteria are set out. It provides that operating costs directly assignable to the development and operation of oil and gas lease issued under a net sharing profit arrangement may be included. No mention is made about allocated overhead, that is, the overhead from the district office which normally is allocated to the individual leases. It might be intentional that this was omitted, but it is called to your attention because it is a significant cost factor in lease operations and one considered by all companies.

In 38.05.180 (a) (4) on line 24 provision is made for a fixed cash bonus with the royalty reserved to the State as a bid variable after public hearing and certification to the legislature by the Commissioner that it would be in the best interest of the State. Since all of the variables in this subsection have a bearing on alternate State income, we can see no difference in no. 4 and nos. 1, 2, and 3 so far as effect on the State treasury is concerned. It would appear that the public hearing route and certification to the legislature would not be any more advantageous on no. 4 than on the others and certainly will require at least an additional year of planning to determine a method of bidding for the sale itself. We can't see the special handling of no. 4 is required.

In section 38.05.180 (b) provision is made for calculation of the State's net profit share of income from a lease. On line 11, page 2, provision is made for net profit share to be taken in kind for both oil and gas production. The methods set out provide that it will be taken

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in kind after the fact. The value of production of both oil and gas cannot be determined until the end of month in which it is produced when it is sold to the purchaser and settlement made on the basis of the facts at that time. Some twenty-five days after that accounting is made to determine the amount due the State. Thus settlement cannot be made for from 25 to 55 days after the date the oil and gas has been produced. Values at that time may have changed and in general an additional 20 to 30 days is necessary to correct all the paperwork required just in settlement of normal oil and gas royalties and making corrections on errors made. Thus this portion of the bill will be virtually impossible to administer if the option is taken to do so. From the operator's point of view, it will be very undesirable because he will not know with any degree of reliability what volumes of oil and gas will be available for him to contract for sales to third parties. It is doubtful that anyone would execute a gas purchase contract with such a variable which could cause significant delivery deficiencies. Further, on line 19 the attribution of profits between oil and gas shall be proportionate to the value of the respective shares of production. We believe that this should be the respective shares of production saved, removed, or sold from the lease since there is a difference between amounts produced and amounts sold.

Subsection (c) provides for perpetuation of a lease producing oil or gas in paying quantities if it is part of a unit approved by the Commissioner under AS 31.05.100-31.05.110. It should be pointed out that AS 31.05.100 provides for the pooling of interest of owners in two or more leases to provide for the drilling of a well within a drilling unit or a spacing unit. Our normal statewide spacing is 160 acres for oil and 640 acres for gas and in some cases an operator may not have enough acreage to drill one well on his lease. The provision in this section of the Statute permits operators to join together to form a pooling unit to drill under the spacing orders provided. AS 31.05.110 provides that the operators may voluntarily integrate their interest to form a unit and where they have not agreed the Department has jurisdiction, power and authority after public hearing where certain criteria are met. It should be pointed out that provision is not made in this section for the Department to approve a unit where the operators voluntarily integrate their interest although under AS 38 a provision does exist. All of the units formed in the State to this date have been voluntary units and do not fall under AS 31. We recommend that consideration be given to changing this portion of the proposal to read that the lease may be perpetuated if oil and gas is produced in paying quantities from the lease or if the lease is part of a unit approved by the Commissioner. This way it would catch any approvals under either AS 31 or AS 38.

In subsection (d) on page 3 provision is made for no rentals for the first and second years. This obviously would give the lessee time to shop the lease in an effort to make a better deal without any additional income to the State. We would recommend consideration that rentals for the first and second year be placed at a minimum of $1 per acre or $1 for the first year and $2 for the second year. We feel that there would be additional incentive under these conditions for development and this

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would minimize the time spent in trying to peddle the acreage. A similar remark could be made for the provisions outlined in paragraph (E) on line 17 and 18 of page 3. Also (3) on line 19 does not provide for any royalty past the primary term if the lease is in production. This would preclude establishment of any minimum income from the acreage. If the leases had the minimum provision that royalty production income must exceed $1 per acre per year or the operator would pay the difference in rental income, this would a sure a continuous income from all acreage under lease.

In lines 6 and 7, page 4, the requirement is made that the leases shall contain a provision requiring a lessee to operate under a reasonable cooperative or unit plan without regard to whether it is in the public interest. Serious consideration should be given about making this a mandatory requirement because some situations can exist where it might not be in the public interest to force a cooperative or unit plan. Existing Statute AS 31 has provision for mandatory formation of a unit or cooperative plan and adequate authority exists for this at the present time.

On line 21, page 4 subsection (g) provision is made to eliminate acreage on a "known geologic structure" from chargeability. This term should definitely be defined and there is a great deal of difference of opinion on what a geologic structure actually is. In the State, our original discovery royalty award was based on a "new geologic structure." In the Cook Inlet area where a decision was based on the existence of a known geologic structure or a new structure, a law suit was filed in each case against the decision of the administration. There are many opinions on what constitutes a geologic structure and the intent should be fully spelled out to minimize the number of law suits that would occur in the future.

On line 24, page 4, subsection (h) most of the provisions included in this section are already covered in AS 31 and AS 38. On page 5, line 13, section (j) provision is made for the storing of oil or gas. The wording of this paragraph provides that a fee must be paid for the storage or rental on the storage of oil or gas acreage subject to lease under this section. The injection of gas occurs many times in oil reservoirs for enhanced recovery. In secton (j), any gas or oil or any other hydrocarbon injected for the purpose of improving the recovery of oil in the reservoir should not be subject to this fee and it should be due only when the products are injected for storage. For example, in the Swanson River field, large quantities of gas are being injected now in a secondary recovery program. This process has been loosely referred to as storage gas in many cases. However, the additional benefits are considerable in the recovery of crude oil and a large portion of the gas ultimately will be recovered. A distinction therefore should be made on what gas and oil the rental fee is due. Also, on line 22 provision is made that the lease shall be in effect so long thereafter as oil or gas not previously produced is produced in paying quantities. This could conceivably result in cessation or cancellation of a lease when huge quantities of oil or gas still remain to be recovered from either a storage project or a secondary recovery project. This would be a paperwork exercise in

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futility. It would probably be better if the words "not previously produced" were excluded and permit the lease to stay in effect so long as oil or gas is produced in paying quantities which is what present leases already provide.

Section 38.05.184 provides for granting competive contract exploration permits with the reward payable by the State to the permit holder per unit of recoverable hydrocarbon discovered. This presumes that the amount of hydrocarbon discovered can be ascertained with some degree of reliability. Many people are being mislead into believing that reserves can be estimated with a high degree of accuracy. Nothing could be farther from the truth. Studies based on estimates of petroleum reserves discovered in the south 48 over many, many years have indicated that on the average, first estimates are in the order of 200 to 300% too low because additional reserves are discovered from additional pools and outlying exploration over many future years. One might look at Prudhoe Bay as an example where after eight years of knowledge and the drilling of more than 100 wells, reserve estimates are changing daily. Very recently a well was completed in the interior portion of the Prudhoe Bay field which did not have enough hydrocarbon saturation to complete as an oil or gas well. Reserve estimates in this area are being revised with the drilling of each well and there is a very large degree of difference in the individual estimates of the different operators in Prudhoe Bay as to what the reserves actually are. In the case of the State's reservoir study, during the last six months of 1975, the area containing gas was increased approximately 10% based on drilling and new information. Wells are being completed daily that are changing the geologic picture and the estimates of reserves are dynamic. There is no way that reserves can be estimated with any degree of reliability until 35 to 50% of the total reserve has been produced and even then the estimates have a degree of accuracy in the order of 90% at most. With a provision included such as proposed, there can be nothing but law suits on the basis of every discovery. We believe that at best $150,000 should be set aside each year to defend law suits on this matter.

On lines 17, 18 and 19 on page 6 provision is made for payment to be made on basis of quantity of hydrocarbons proven to be economically recoverable from the land, covered by the permit. No one can tell the amount of hydrocarbons to be recovered and no one can tell what reserves can be recovered economically because operating costs and crude price play an important factor in these determinations. The only reason that we haven't been plagued by law suits on the "reserves tax" already is because of the "pay back" provision, but we shouldn't be so naive as to believe operators would not file suit on this bill. Further, in line 21 provision is made for an independent assessment board consisting of three professional engineers. No provision is made for the type of professional engineers however, it should be pointed out that of all the types of professional engineers, only petroleum engineers are trained in this line of work.

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Section (d) page 6 provides that no reassessment will be allowed after 10 years have elapsed except as required by actual production. No provision is made as to how often this could occur, whether it would be annually, monthly, or some number of years. Either party should be able to request a reassessment at his expense but assessment should be made no more often than once each 3 years. Also, the right of appeal from the decision of the assessment board should be spelled out because there will be disagreement of major magnitude. Section (e) page 7, line 2 provides for payment of gas discovered on the basis of a ratio determined by the Commissioner before offering the contract. However, the payments may be made many years down the road. For example, actual production may change the reserve estimates and some monetary exchange would be necessary. The relative value at that time might be far different than at the time the permit went out for bid. As a matter of fact, this section does not provide for any payment on actual amount of gas discovered, only that it will be paid on the basis of a ratio with oil as determined by the Commissioner prior to bidding. If an operator finds a major gas field and a very minor oil field, the way we read the bill, settlement would be made on the basis of an arbitrary ratio established by the Commissioner regardless of the actual values of oil and gas produced.

Section (f) says that the Commissioner may limit the actual annual discovery reward payment prior to the issuance of the permit or contract. This might prove to be self-limiting as few if any oil operators are willing to take the risk and spend money to discover something knowing that they can only get a return based on some annual partial payment to be determined by the State. This would appear to be more in line with the utility laws where repayment comes over a long period of time and profits are limited. In this high risk business, an operator would be insane to accept these terms.

In the examination of this bill, we see very little that we believe would prove beneficial to the State. The different bidding provisions on page 1, sections a-1, 2, 3, and 4 might prove helpful to the Department in determining optimum methods of bidding for the State, but they can be just as detrimental by preventing other types of bidding. The additional rental payments provided in subsection (d) could be beneficial and would accelerate development in the State. It should be borne in mind, however, that increase in rentals of this nature would have the effect of an operator attempting to increase his development schedules and it carries an obligation that the State would have to timely approve permits for this. The provisions regarding unitization and perpetuation of leases are already covered in existing leases and we cannot see that they improve the situation, but they may in fact confuse the situation because of conflicting jurisdiction in two different Statutes. And finally, the provision for contract exploration permits is one that we cannot see how any oil and gas operator would, under any condition, be agreeable to doing exploratory work for the State without some assurance that he could participate in the benefits. Certainly, this provision as written assumes that an operator would pay the State a fixed cash bonus for

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the opportunity to go and risk his money and drill for oil reserves in the hope that the State would reward him if he found something. The odds are 9 to 1 against him finding anything in the first place and about 50 to 1 that he will make a commercial find. Consequently, without some reasonable assurance that he could recover his money, he would be foolish to make a bid for a contract on this basis. More than likely, the operator would want the State to pay him a fixed bonus to go out and drill with the hope that he would have some option to participate in the discovery, if it occurs, either through acreage acquisition or through some rights to market the oil or gas discovered. A provision like this we think would bring exploration to a complete halt in the State of Alaska except what could be financed directly out of the State treasury.

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MEMORANDUM

DEPARTMENT OF NATURAL RESOURCES
Division of Oil and Gas

RECEIVED
APR - 1 1976
Department of
Natural Resources

TO: Guy R. Martin
Commissioner

Thru: O. K. Gilbreth, Jr.
Director

DATE : March 31, 1976

FROM: Hoyle H. Hamilton
Chief Petroleum Engineer

SUBJECT: Review of HB 872

Oil and Gas Leasing

This part of the bill provides 4 alternatives the commissioner may follow in regard to bidding oil and gas leases. Alternative (1) provides a fixed royalty of 12 1/2 % and a cash bonus bid. This seems to be a step in the opposite direction that most people seem to be advocating today. A 12 1/2% royalty is less than in our last competitive lease sale, which was 16 2/3%. The general feeling today is for higher royalties, not less royalty. In my opinion, a fixed 16 2/3 % royalty with bonus bidding is the best way to go on competitive lease sales unless there is real drainage acreage involved.

Alternatives (2) and (3) involve a net profit share to the State either in a fixed amount as in (2) or a bid variable as in (3). The commissioner shall by regulation establish accounting procedures for the calculation of net profits.

Net profits would be a very undesirable way for the State to take its share from oil and gas production. The State would be taking the same risks for a net profit share as with a royalty share, however, a net profit share would require much more accounting. In forecasting State revenue from a lease with a royalty provision you have two variables to evaluate, production and wellhead value. With net profits a third variable would be introduced, operating costs. Normally at the end of each month the State royalty share, either in value or kind, can easily be determined. With net profits it may take many months before all the operating costs could be compiled and the State's share accurately determined. The operators incentive to keep operating costs at a minimum are proportionately lessened.

The fourth bidding alternative (fixed cash bonus and royalty bid) would require a public hearing. This seems a useless and time-consuming effort to go through in establishing any bidding procedure. It seems that the royalty board, the legislature and the commissioner should be responsible enough to see that the best interests of the State are met without a public hearing.

On page 2, line 11. It provides for the State to take its net profits share of oil and gas in kind. This would amount to the State taking a share of future production based on the net profits calculated from past production. This would be an accounting nightmare. There is no provision for how frequently the net profit determination would be made.

In lines 14 through 17 on page 2, it is not clear how the determination is to be made for taking in kind volumes of oil and gas.

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On page 3, item (3) under (d) doesn't make sense.

In summary, on the first part of this bill regarding bidding, there seems to be nothing to gain but headaches for the State to go for a net profit share when a royalty share would give the State the same thing with less problems. Fixed royalty and bonus bidding with 12 1/2% as a minimum, as in the present statute, would make more sense and give some leeway for higher fixed royalties.

Oil and Gas Competitive Contract Exploration

This bill provides for competitive contract exploration permits for oil and gas, but does not say whether these are seismic permits, drilling permits, or both.

These competitive exploration permits are to be awarded on a fixed cash bonus with the operator bidding for the reward he wants in terms of the reserves he discovers. What is the reward the State pays the operator? Is this to be money or some stock in the State oil company?

On page 6 (c), the bill provides for an independent assessment board, consisting of three professional engineers that would determine the reserves discovered by the permittee. The bill does not specify what engineering field these professional engineers are to be licensed.

If gas reserves are discovered it provides on page 7 (e) that the payment shall be on the basis of a ratio between the expected average values of oil and gas established by the commissioner before offering the exploration permit for bid. This cannot be done with any certainty even after a discovery is made. For example at Prudhoe Bay, eight years after discovery, this ratio is still uncertain.

In my opinion there would be little interest by the oil operators to try and obtain an exploration permit as described in this bill since there is no assurance they would acquire any of the reserves there might be found.

Assuming that with a very low fixed bonus some operators would bid and acquire an exploration permit. What is the State's position? Since the State does not have any unleased drainage acreage these permittees would be wildcatting for the State. For every dry hole drilled the State would lose its opportunity to acquire a bonus from a lease sale on that land. The Prudhoe Bay field has been like a siren song to many oil operators. This is also true with some of our legislators. We should be looking at the future when advocating a State policy regarding our lands with oil and gas potential. If you do this and look at the odds of finding a large field, I think the State would lose its shirt following the procedures proposed in this bill.

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MEMORANDUM

TO: Roger Lewis
Legislative Liaison
Office of the Commissioner

DATE : April 5, 1976

FROM: Pedro Denton
Chief, Minerals Section
Division of Lands

SUBJECT: HB 872

This bill would eliminate two of the best schemes for oil and gas leasing. These are straight bonus bidding with fixed royalty rates at higher than 12½% (percent) and bonus bidding with a sliding scale royalty. Both of these are allowed under present state law.

I have no objection to the other bidding schemes being provided for; but, I doubt it would be in the best interest of the state to use them. Basically, "net profits" are too difficult to administer. I do not have much confidence in our ability to determine "net profits" when we still do not have an answer to "well head" value in Cook Inlet. We might be able to narrowly define net profits by regulation so that they would be easily definable; but, it would appear just as easy to design a sliding sclae royalty that would accomplish the same thing without the inherent administrative costs of monitoring net profits.

I am opposed to royalty bidding because it encourages speculative bidding by those unable to perform and would lead to waste of resources by premature abandonment. The state would also, more fully, participate in the risk; but this could be controlled somewhat in well known areas by the amount of the fixed bonus.

Another major problem is that the alternatives allowed include almost all the bidding schemes that have been studied so much in relation to oil and gas leasing during the past few years. I am concerned that an administration faced with a tremendously complex decision, potentially involving many millions of dollars, will simply be unable to timely make decisions with so many complex alternatives. As different administrators jump from scheme to scheme, we will only add to the already far too much uncertainty in Alaska and thereby actually decrease our take by whatever scheme we use. This is all so unnecessary because basically the same thing can be accomplished by intelligent management of either of the schemes; some easier and with less cost than the others. We must remember that all of these theories are projected by various proponents to accomplish essentially the same thing; bring in the greatest return to the government. What many of these theorists forget in the equation are the fundamental problems of government and business.

I would thus rather see only one scheme provided by statute, bonus bidding, with the latitude to set fixed or sliding scale royalties. With fairly simple determinations, these can be tailored to fit the basic objectives of the state as situations change. If this bill must be considered, I recommend that Sec. 38.05.180(a)(1) be amended to state the royalty "not less than 12½%" instead of the flat 12½% (percent) proposed.

I recommend deleting the requirement in Sec. 38.05.180(c) to certify leases of over 5 years to the legislature. In many remote areas 5 year leases will be too short to receive maximum return from a sale. The sharply escalating

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rentals should protect against abuse from longer term leases and make checking with the legislature unnecessary. The references to AS 31.05.100 through AS 31.05.110 should be deleted. As written, it could imply that leases could only be extended if in a forced unit and I doubt this was the intent. Line 27 and 28 on page 2 should be rewritten to read as follows:

> "lease or, if the lease is committed to a unit approved by the commissioner."

The proposal would (probably by oversight) eliminate the drilling over the expiration date concept in the present law. This provision echoes several problems inherent in mineral development and should be included. It is the third from the last sentence under present AS 38.05.180(a).

The proposal would also eliminate the preference right provision presently under AS 38.05.180(j) and (k). This is a good provision and was designed to solve the title problems in the many federal lease areas with water-bottoms of unknown title. The State's interest is protected by the competitive bid procedures and by our right to object to federal leasing of water-bodies that are clearly navigable.

Section 38.05.184 is confusing and would require considerable study to determine if it is workable. The discovery reward concept appears unworkable but perhaps it could be cured by regulation. The concept of designating "a single petroliferous subsurface geological structure" may also be unworkable or unrealistic without provisions for more data gathering. I doubt that the intended incentives of this bill (i.e. preference right and discovery award) would intice very much revenue, but the bill would be extremely expensive to administer and could condemn considerable state acreage.

cc: Dale Tubbs
Mike Smith