

U. S. DEPARTMENT OF THE INTERIOR

Minerals Management Service

DETERMINATION OF THE EFFECTS OF FEDERAL GAS VALUATION RULES

February 6, 1997

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EXECUTIVE SUMMARY

INTRODUCTION

This report and its accompanying cost/benefit analyses determine and describe the effects of Minerals Management Service's Federal gas valuation regulations and proposed amendments to those regulations. This determination is required by several legislative and executive orders: the Unfunded Mandates Reform Act of 1995, the Regulatory Flexibility Act as amended, and Executive Order 12866.

BACKGROUND

The MMS published a proposed rule on November 5, 1996, based on the consensus of the Federal Gas Valuation Negotiated Rulemaking Committee (Committee). This consensus proposal provided for the use of published index prices as an alternative to using gross proceeds for valuing gas produced from Federal lands. In light of the concern expressed in many of the comments received from 44 entities, MMS reconvened the Committee on June 12-14, 1996. At that time, MMS asked the Committee to develop five options for further rulemaking. The Committee could not reach consensus on a unified proposal by the Committee. At the same time, MMS reopened the public comment period and asked for public comment on the five options. The reopened comment period closed August 19, 1996.

The MMS met internally in October 1996 and agreed to a framework for developing further proposed rulemaking for valuing gas for royalty purposes produced from Federal lands. A team was formed to perform a cost/benefit analysis as required by law. This cost benefit analysis focuses on three viable options for proceeding with gas valuation regulations: Option 1 - remain with the status quo - i.e. gross proceeds, Option 2 - finalize the committee consensus, or Option 3 - propose an index + a percentage methodology to approximate revenue neutrality. In the latter option, the percentage would be calculated net of transportation cost. The percentage would be based on a sample of the gross proceeds received by index payors and their affiliates in each index zone.

ANALYSIS OF OPTIONS

Option 1 - No quantitative analysis was performed for this option. Because no change occurs under this option in the way royalties are determined, there would be no effect on Federal gas royalties. However, there would be associated administrative costs to MMS and industry.

Option 2 - The analysis for this option used data for 1994 and 1995 for the five zones in the Gulf of Mexico, the San Juan Basin, and southwestern Wyoming (approximately 93% of all Federal gas produced). The analysis produced two conclusions:

- For most gas sold by both large and small payors, actual prices received for gas were greater than the index price.
- Allowing payors to pay royalties based on index instead of gross proceeds would result in an overall loss in royalty revenue. The estimated loss for all seven zones was in excess of \$20 Million per year.

Option 3 - The analysis for this option showed that the revenue impact would be far less than under Option 2. Revenues under Option 3 increased just less than \$1 Million.

There would also be administrative impacts under Options 2 and 3. Costs to both industry and MMS would decline in tracking and auditing gross proceeds. However, MMS would sustain additional administrative costs in calculating an annual median value or a percentage factor to implement index pricing for royalty purposes.

RECOMMENDATION

Recommendation is Option 3: Index + X

Option 3 imposes the least administrative costs on affected parties overall, results in a minimal revenue impact to MMS, and eliminates the need for transportation allowances.

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REPORT AND ANALYSIS

INTRODUCTION

This report and its accompanying cost/benefit analyses determine and describe the effects of Minerals Management Service's gas valuation regulations and proposed amendments to those regulations. This determination is required by several legislative and executive orders: the Unfunded Mandates Reform Act of 1995, the Regulatory Flexibility Act as amended, and Executive Order 12866. These orders require an agency to determine analytical and consultation requirements, such as a cost/benefit analysis, before issuing new regulations. This report is intended to satisfy those requirements.

SECTION 1. DESCRIPTION OF THE PROPOSED GAS VALUATION RULES

The Minerals Management Service is amending 30 CFR Parts 202, 206, and 211 to add several alternative gas royalty valuation methods to the existing regulations. These methods result from meetings and discussions of the Federal Gas Valuation Negotiated Rulemaking Committee (Committee).

A. The rule provides additional options to lessees in the valuation of gas sold under arm's-length sales contracts and under non-arm's-length sales contracts in areas with an active spot market. Specific provisions address:

- conditions to be met in order for a lessee to elect to use published gas price indices in the valuation for royalty purposes of unprocessed, processed gas and natural gas liquids.
- conditions under which lessees selling gas under non-arm's-length contracts, may use either published gas price indices or affiliates arm's-length gross proceeds in establishing value for royalty purposes;
- procedures used when establishing the appropriate index pricing points;
- criteria the MMS will use in determining valid gas price index publications to be used as a source of information in the valuation of gas for royalty purposes; and

- procedures the MMS will use in the calculation of a 'safety net' value to be used in collecting additional royalties when royalty valuation based on published price indices is below the gross proceeds valuation within a zone.

B. The rule outlines new procedures for the valuation of gas produced from unitization and communitization agreements with different lessors, royalty rates and funds distributions. The rule provides:

- procedures for reporting and paying gas royalties on an entitlements basis, and
- procedures for small operators who cannot market their full share of gas during each month of production.

C. The rule outlines procedures for calculating the costs of transporting gas from the lease to the point where the gas is valued for royalty purposes. Specific provisions apply to the following when determining allowable costs of transportation:

- unprocessed gas, residue gas and gas plant products,
- gas transported through jurisdictional or non-jurisdictional pipelines, and
- new-definitions of gathering and compression.

SECTION 2. PURPOSE OF THE PROPOSED GAS VALUATION RULE

The proposed gas valuation rule provides lessees with new gas valuation mechanisms reflecting changes in the gas market. These alternative mechanisms are designed to value gas production from Federal leases - Indian leases are not covered by the rule - and would add options to the valuation procedures in the existing regulations. The rule is designed to:

- allow-lessees to use readily accessible gas price indices to value production for royalty purposes. The intent being to reduce complexity, cost and uncertainty in establishing royalty values, net of transportation allowances, acceptable to MMS;
- promulgate timely and definitive criteria for lessees and auditors to use in valuing gas where lessees sell under non-arm's-length contracts or where lessees sell less than or none of their entitled share;
- establish a procedure for operating rights owners to value and to report and pay royalties on production from Federal leases that are part of mixed agreements. Mixed agreements are Federally approved agreements in which participating leases do not have the same lessor, royalty rate, or fund distribution; and,
- achieve these objectives without jeopardizing the public's royalty interests.

SECTION 3. NEED

Valuation of gas sold under arm's-length sales contracts and under non-arm's-length sales contracts in areas with an active spot markets

The Federal Energy Regulatory Commission (FERC) has deregulated the gas industry through a series of orders which culminated in Order 636. This FERC order was directed principally at the natural gas pipelines which had been the traditional purchaser of gas produced by producers/lessees. Order 636 required natural gas pipelines to provide their sales service and their transportation service on a separate basis. The Order obligated the pipelines to market their transportation services on a non-discriminatory or common carrier basis. As a consequence, the pipelines traditional customers, local distribution companies (LDC's) and end users, began purchasing gas directly from producers/lessees and gas marketing companies. Producer/lessees and gas marketers began to perform and receive compensation for downstream services traditionally performed by pipeline companies. These services included 'firm' and 'interruptible' transportation, storage, swing supply, capacity release, market hub services, and pipeline imbalance resolution.

These developments have increased the difficulty of establishing gas royalty value under traditional procedures employing gross proceeds. With the advent of deregulation and open access, some producers/lessees began aggregating gas produced from many sources and selling the gas directly to LDC's and end users. These sales generally guaranteed delivery of specified volumes without regard to source of production. These changes in contracting procedure have resulted in far more complicated valuation of gas for MMS royalty purposes because gas is being sold through pools, market centers and hubs.

Valuation of gas produced from unit and communitization agreements with different lessors, royalty rates and funds distributions

In general, the royalty valuation regulations require that royalties be paid on the full share of production allocated to each Federal lease in the agreement. The operator designated in the agreement reports production under an agreement number. The agreement number is associated with a particular allocation schedule. Total production for the leases included in the agreement is allocated to each lease on the basis of the agreement allocation schedule. If the lessee does not take its full entitled share of production, royalties are nonetheless due on the full share of that production. Under the provisions of the current regulations, the portion of the allocated production which the lessee does not take shall be valued based on the circumstances controlling the actual disposition of the gas. In other words, a lessee must trace the production to determine what other lessees within the agreement have taken the gas and determine the disposition of the gas to establish the correct royalty value. A lessee taking more than its allocated share of total production must allocate the "overages" to the other lessees within the agreement. Lessees have difficulty in determining the disposition of the gas by other agreement participants and the

value at which the gas was sold.

The administrative burden is substantial for both the lessee and MMS. The system compares the lease's allocated production from the production report (Monthly Report of Operations - Form MMS-3160, or Oil and Gas Operations Report - Form MMS-4025) to the sales reported for the lease on the Report of Sales and Royalty Remittance - Form MMS-2014 (2014). Each month the system detects about 8,400 such discrepancies. Of that total, 6,200 are attributable to discrepancies between sales and production. If discrepancies are noted, a notice is sent to the payor. A majority of discrepancies result from companies within the same agreement paying on different methods (takes or entitlements).

SECTION 4. THE ALTERNATIVES CONSIDERED

Issue addressed by chosen option: valuation of gas sold under arm's-length sales contracts and under non-arm's-length sales contracts in areas with an active spot market

The Committee considered several alternatives in valuing gas for royalty purposes. These alternatives included the following: (1) value established by the Secretary of the Interior, (2) unrestricted election on the part of the lessee, (3) case by case approval, and (4) gross proceeds/weighted average pool pricing.

(1) Value established by the Secretary of the Interior

Under this option, MMS would publish a price monthly by region or area; the price published would be net of a deduction for transportation. The MMS would compute the price based on sales data reported on the 2014, or by any MMS survey of prices similar to that performed currently by publications reporting gas price index information.

This option has a principal advantage of providing some certainty in valuation and some simplification in audit procedures. However, the procedure was rejected for the following reasons:

- Regional or area wide prices do not reflect differing market conditions or transportation costs for delivering gas from individual leases.
- The administrative burden imposed on MMS would increase since the procedure would require extensive data on complex transactions.
- In the some instances the procedure would result in the lessees paying royalties on a value which exceeds the actual proceeds received for the gas.
- MMS is not a disinterested party as are the publications which prepare index pricing data.

(2) Unrestricted election on the part of the lessee

Under this option, lessees would choose to use either index prices or gross proceeds to value their gas on a lease, field or area. Lessees would have the option of using index valuation in areas where gross proceeds calculation proved to be cumbersome and a valuation based on gross proceeds where indices were not appropriate. The procedure has the advantage of avoiding the disagreeable aspects of an imposed mandate.

The principal reason for rejecting this option was the possibility that lessees would deliberately choose one method over another in order to minimize their royalty payments. Another concern arose over the possibility that unrestricted election by lessees would result in different valuation procedures within a single lease and would complicate audits and the validation of market value.

(3) Case by case approval

In this option, lessees would request approval from MMS to apply index pricing to a lease, field or area. This procedure would operate much like the lessee election procedure but since MMS would employ a screening procedure, the lessee's ability to reduce royalty obligations would be minimized.

This method was rejected based on concerns that the screening procedure would impose too great an administrative burden on MMS. The administrative screening procedures would in many cases result in delays. Moreover, this option would create valuation uncertainty for lessees and could result in disparate treatment among different lessees.

(4) Gross proceeds/weighted average pool pricing

Use of the current method to value production, gross proceeds, received different levels of support from committee members. Generally, small independents, States, and MMS favored a valuation method based on actual proceeds received from an arm's-length sale of production. Small independents favored gross proceeds for royalty valuation for several key reasons:

- Gross proceeds represent the actual value received.
- The use of gross proceeds does not impose a significant administrative burden on some smaller companies that sell gas at or near the wellhead.
- Royalties have historically been due on gross proceeds.

Small independent producers generally sell gas at the wellhead to marketers or aggregators, or, in a limited number of cases, downstream under a single transaction. But for major oil and gas companies and larger independents, the use of gross proceeds can become complicated if the production is commingled (pooled) with production from other sources prior to sale. With the

multitude and complexity of sales transactions in the post Order 636 environment, companies have found it increasingly difficult and costly to determine the weighted average sales values and

to allocate those values back to Federal leases for royalty purposes. As LCD's become deregulated, gas will, in all probability, be sold directly by the producer/lessees to commercial and small end users; such development will further complicate the myriad of transactions.

Issue addressed by chosen option: valuation of gas produced from unit and communitization agreements

The discussion of alternatives addressed the issue of "takes," a term used to describe the portion of production which the lessees actually takes within a given month. The discussion also addressed the issue of "entitlements" a term which refers to the portion of total production to which the lessee is entitled during a given month. While several options were examined, five were given extensive consideration. The following list is a brief summary of the five final proposed options: (1) Oklahoma Senate Bill 168 Example (OSB-X), (2) Modified Takes, (3) Entitlements, (4) Entitlements with Marketing Requirements/Options, (5) Exception to Entitlements.

In making the final selection on the various options, MMS employed the following criteria:

- The option had to show promise of keeping the Federal government whole;
- The option needed to be based on the principle that the Federal lessee is liable for royalties due on its entitled share of production;
- The option needed to respect the fact that the royalty rate specified in the lease is the rate which must be used in establishing royalty obligations, and
- The royalty value must be determined at the time of production.

1) Oklahoma Senate Bill 168 Example (OSB-X)

This option is based on Oklahoma Senate Bill 168 in which all selling parties would pay royalties to a single entity (Operator or MMS) and that entity would disperse royalty payments to all royalty owners. This option was eliminated from consideration for several reasons: first, the option would require legislative changes, second, the option would be administratively burdensome to the single entity (Operator or MMS) and, third, royalties would be based on weighted average price which may be lower or higher than the amount that the lessor is entitled.

(2) Modified Takes

This method would be similar to OSB-X in computing royalty payments. Each sales volume would be attributable to each tract based on the tract's proportionate participation factor. However each taking party would pay each royalty owner directly. This option was eliminated from further consideration because of many of the same reasons which applied to SB-X above.

including the administrative burden placed on each lessee to maintain current or up-to-date payee data on every lessor in the entire Agreement.

(3) Entitlements

This method would require each lessee/working interest owner/operating rights owner to pay or cause to be paid royalties on their entitled share of volume allocated to the lease using the valuation criteria established by the Minerals Management Service. This "pure entitlement" method was rejected principally because independent producers would be forced to pay royalties on production allocated to a lease but not actually taken and sold by the lessee. Some independents emphasized that they incur administrative burden and increased cost in trying to obtain from the operator the information regarding production allocable to their leases.

(4) Entitlements with Marketing Requirements/Options

This option would be based on an approach similar to that of the preceding option; however, if the lessee were not able to or were to choose not to market its share of production, it could market sufficient gas to generate income to cover royalties due on its entitled share of production. This option was rejected because of the small volumes which would be marketed only to avoid out-of-pocket royalties. Small volumes would, in most cases, mean lower prices per MMBtu.

(5) Exception to Entitlements

This options provides the lessee with provisions to obtain MMS approval for an exception to allow payment by other methods. The option was rejected because it is administratively burdensome and it involves uncertainty in valuation. However, a version of this option was ultimately adopted which does not involve an application process and was limited to certain producers.

SECTION 5. OPTIONS DEVELOPED SUBSEQUENT TO NOVEMBER 6, 1995

The MMS published a proposed rule on November 5, 1996, based on the consensus of the Committee. In light of the concern expressed in many of the comments received from 44 entities, MMS reconvened the Committee on June 12-14, 1996. At that meeting, Committee members recognized the need to simplify the proposed regulation. The challenge was to formulate a proposal that assured revenue neutrality, accounted for any NGL revenue uplift if index prices were applied to the wellhead MMBtu, and captured downstream royalty-bearing services being performed by the affiliated or non-affiliated purchaser. The MMS asked the Committee to develop five options for further rulemaking. Consensus could not be reached on a unified proposal by the Committee. At the same time, MMS reopened the public comment period and asked for public comment on the five options. The reopened comment period closed August 19, 1996.

The MMS met internally in October 1996 and agreed to a framework for developing further

proposed rulemaking for valuing gas for royalty purposes produced from Federal lands. A team was formed to perform a cost/benefit analysis as required by law. This cost benefit analysis focuses on three viable options for proceeding with gas valuation regulations: (1) remain with the status quo - i.e. gross proceeds, (2) finalize the committee consensus, or (3) propose an index + a percentage methodology to approximate revenue neutrality. In the latter option, the percentage would be calculated net of transportation cost. The percentage would be based on a sample of the gross proceeds received by index payors and their affiliates in each index zone.

SECTION 6. INTERVIEWS WITH NATURAL GAS MARKETERS

Several natural gas marketers were interviewed regarding index pricing as a viable indicator of market value. All marketers including those in the Rocky Mountain region and the Gulf of Mexico agreed that index pricing was a valid market indicator and that index prices were commonly used in both short-term and long-term transactions. They also agreed that index prices would continue to play a part in establishing the market value of gas in the future, although their use would swing with the ebb and flow of spot gas sold. One marketer estimated that at present about 50% of gas is sold in the spot market.

Some marketers thought that spot market pricing would come more into favor among local distribution companies as current market prices are easier to defend in front of public utility commissions. The marketers pointed out that, unlike oil, the natural gas market is too diverse to be controlled by just a few companies. Therefore, index prices more truly reflect actual market conditions. (However, this could change in the era of mega-mergers.) One Gulf marketer, however, indicated that index prices were becoming less favorable in comparison to NYMEX. He thought that NYMEX-type pricing would eventually dominate the market.

In evaluating options, MMS should consider possible future use of commodities pricing for valuation purposes. A system similar to that proposed in oil valuation may be desirable.

SECTION 7. ANALYSIS OF OPTIONS

ANALYSIS #1: ROYALTY IMPACT OF OPTION 1 - MAINTAINING GROSS PROCEEDS AS THE BASIS FOR GAS VALUATION

Introduction

This analysis addresses the effect on Federal royalties if lessee's continue to pay on their gross proceeds as currently required by the regulations. In brief, because no change occurs under this option in the way royalties are determined, there would be no effect on Federal gas royalties. However, there would be associated administrative costs to MMS and industry. This option is the baseline for evaluating the other two options.

Analysis Results

Continuing to require gas valued on the lessee's gross proceeds in all circumstances would have increasing administrative costs to both MMS and industry. Under new marketing arrangements brought on by FERC Order No. 636, many producers, and particularly large producers, aggregate production from many sources and sell it directly to end-users out of gas pools. The pools are usually remote from the lease and the sales are numerous. Large producers typically sell varying amounts of gas to dozens of different purchasers each month. The sales proceeds may include not only a commodity price but also components for services and guarantees delivered by the producer. Transportation charges may include costs not only for transportation but also for services associated with marketing. Tracing the gross proceeds and allowable deductions back to the lease requires a complicated weighted-average net-back calculation. The calculation must account for the proper allocation of sales volumes, transportation rates, and transportation fuel volumes to each lease. The process is further complicated when sales or transportation transactions are adjusted and the net-back calculations must be redetermined.

The major companies have claimed that the gross proceeds requirement is out of date and that it costs them additional personnel to trace their gross proceeds to the individual Federal leases each month. One major company recently invested more than one million dollars on a new computer system for tracking pool sales and computing net-back prices. This procedure results in uncertainty in gas valuation.

Determining the gross proceeds under FERC Order No. 636 is costly not only to industry, but also to MMS. MMS is likely to bear litigation costs to defend its position that all proceeds for services and guarantees are part of the lessee's gross proceeds for royalty purposes. Auditing a lessee's gross proceeds will also become increasingly difficult and time-consuming.

ANALYSIS #2: ROYALTY IMPACT OF OPTION 2 - USING PUBLISHED INDEX PRICES UNDER THE PROPOSED FEDERAL GAS VALUATION RULE

Introduction

This analysis studies the effect on Federal gas royalties if certain payors choose to pay on published index prices instead of their gross proceeds as historically required. The analysis uses royalty and index pricing data for 1994 and 1995 for the major gas producing zones. These zones include the five in the offshore Gulf of Mexico (GOM) as proposed by the Federal Gas Valuation Negotiated Rulemaking Committee in its March 1995 report, the San Juan Basin in northeastern New Mexico and southern Colorado, and the overthrust belt in southwestern Wyoming. Only Federal unprocessed gas data is used in the analysis. Based on production figures obtained from RMP's Mineral Revenues 1994 and Mineral Revenues 1995, and the Wyoming Oil and Gas Commission, the seven zones comprise over 93% of the Federal gas produced nationwide.

In brief, this analysis first compares index prices to the gross proceeds prices paid to MMS by companies likely to pay on index, and then calculates an amount of additional royalties due (a 'true up') by those companies in the event that the index value is less than the safety net median

value (safety net) calculated using the gross proceeds paid by companies likely to pay on gross proceeds. The total royalty impact is determined by calculating, for the index payors, the annual price difference between the index price, adjusted for the true-up, and their weighted average gross proceeds price, and multiplying by their royalty quantity of Federal production.

Instead of sampling, the analysis uses all Federal data in each zone. Based on statistical sampling theory, sampling would not be feasible in this study because of the wide deviation in prices across a zone. Because of the price deviation, the sample size would approach or exceed the population. However, using the full population of data in each zone has certain disadvantages with respect to tracing of lease production to individual index points. To address these disadvantages, the study has employed simplifying assumptions regarding averaging of index prices and averaging of transportation deductions from index prices. First, because actual transportation costs to index points could not be determined for this study, the study used the average transportation allowance rates reported to MMS as a deduction from the index values to arrive at a net wellhead value. Second, assumptions were made regarding which payors in each zone would convert to index valuation and which payors would choose to remain on gross proceeds. The following description outlines the specific procedures and assumptions employed in the analysis.

Procedures and Assumptions

1. Use data for 1994 and 1995.
2. Include sufficient zone coverage to assure that major percentage of all Federal gas is used in the analysis:
 - 5 offshore GOM zones
 - San Juan Basin (McKenzie, Rio Arriba, San Juan, Sandoval, and La Plata counties)
 - Southwestern Wyoming (Sweetwater, Uinta, Lincoln, and Sublette counties)
3. Download Federal royalty data for unprocessed gas in each zone. Sort data by payor/lease/month.
4. Segregate data into two sets of payors: large payors likely to convert to index and smaller payors who would likely remain on gross proceeds. Generally the 20 or so largest payors or largest integrated companies were assumed to choose index prices as the basis for royalty valuation. Included in this group were some large independents who showed an interest in index valuation during the negotiated rulemaking process. For a listing of payors in each zone assumed to choose index valuation, see Appendix A.
5. Calculate a weighted average price per MMBtu for each payor/lease/month: Combine ('roll up') all selling arrangement lines to a payor/lease/month level, netting out transportation deductions. Use gas quality data to convert Mcf to MMBtu. If Btu data is missing, is less than 600, or is greater than 2000, use the average Btu in the zone for the year.

6. Determine both the total monthly and annual Royalty Quantity (in MMBtu) for Index Payors likely to convert to index in each zone.

7. Calculate the annual Safety Net Median Value (in \$/MMBtu using major portion procedure) for each zone using monthly lease level prices for payors remaining on gross proceeds. This value is the annualized median price based on the gross proceeds actually paid by non-index payors net of transportation cost at the wellhead.

8. Calculate the annual Weighted Average Gross Proceeds Price (in \$/MMBtu net at wellhead) for Index Payors for each zone. This is a single aggregate price for all such payors in each zone. This value is the annualized weighted average price that index payors actually paid based on their gross proceeds net of transportation cost at the wellhead.

9. Calculate the Weighted Average Index Value (net at the wellhead) for each zone. This procedure includes several steps.

(a) Calculate the average index price in each zone for each month: For the GOM and Wyoming, calculate the arithmetic average of indexes published in Inside FERC and Natural Gas Intelligence (NGI) for all pipelines in the zone. For the San Juan Basin, calculate the arithmetic average of indexes published in Inside FERC and NGI. In this zone, El Paso pipeline and Northwest pipeline were given respective weights of 0.6 and 0.4. For list of pipelines and their associated index prices used in each zone, see Appendix B.

(b) Calculate the average transportation allowance rate reported to MMS (\$/MMBtu) each month for each zone.

(c) For each month, deduct the average transportation allowance rate from the average index price to arrive at a net average index-based wellhead price. Appendix B also shows the average MMS transportation rate and the net index-based value after transportation is deducted.

(d) For each month, multiply the net average index-based price by the total monthly royalty quantity for index payors as determined under 6. Calculate a total for the year to arrive at the total index-based royalty value. Divide this amount by the annual total royalty quantity to arrive at the weighted average index value for the year.

This value is the annualized weighted average price that index payors would pay based on index net of transportation cost at the wellhead.

10. Compare the values under 7, 8, and 9(d) to assess royalty impact:

Royalty impact = [royalty quantity for index payors] x [index payors gross proceeds price - [one half of the difference between the safety net median value and the index payors index price + the index payors index price]], or stated another way:

Royalty impact = [royalty quantity for index payors] x [the difference between the index payors gross proceeds price and their index price after true-up].

Under this formula, a positive value indicates a loss in revenues (an actual loss in royalties); a negative value means revenues would be gained (no loss in royalties). Appendix C shows the comparisons of index prices, index payors gross proceeds, the safety net calculation, and the royalty impact for each zone in 1994 and 1995.

Analysis Results

For most of the seven zones in both 1994 and 1995, use of index prices by the largest payors resulted in a loss of royalty revenues. Only GOM zone 5 for 1994 and Wyoming for 1994 showed a revenue gain from using index prices. Because it produces the greatest volume of gas, the greatest revenue impact was in the GOM, with a \$20.4 Million dollar loss for 1994 and a \$19.7 Million for 1995 for all five zones combined. The San Juan Basin showed the greatest fluctuation with a \$0.88 Million loss for 1994 and a \$5.96 Million loss for 1995. Wyoming fluctuated from a gain in 1994 of \$.32 Million to a loss in 1995 of \$.41 Million. For all seven zones for both years, the total net impact was a \$47 Million loss.

In the GOM as a whole, the results were very similar for both 1994 and 1995, reflecting the relative stability of index prices in the GOM for both years. However, individual zones within the GOM showed divergence, with royalty impacts ranging from a gain of less than \$1 Million to a loss greater than \$11 Million. These losses apparently had no relation to the amount of gas produced in the zone. In fact, the dollar royalty impact per MMBtu of gas produced by the assumed index payors varied widely from zone to zone: Zone 1 - \$0.027 per MMBtu; Zone 2 - \$0.011 per MMBtu; Zone 3 - \$0.065 per MMBtu; Zone 4 - \$0.345 per MMBtu; and Zone 5 - (\$0.043 per MMBtu).

In the San Juan Basin and Wyoming, where the Rocky Mountain indices were significantly depressed in 1995, the change in revenue impact is much more apparent, increasing many fold. In 1994 the average index price for Wyoming was \$1.53 per MMBtu. In 1995, the average price dropped to \$1.09 per MMBtu. For the San Juan Basin, the average index price went from \$1.60 per MMBtu in 1994 to \$1.15 per MMBtu in 1995. As a result, Wyoming went from an estimated royalty gain in 1994 to a loss in 1995. In the San Juan Basin, the estimated royalty loss went from \$.88 Million in 1994 to \$5.96 Million in 1995. It is also worth noting that the average transportation allowance deductions in the San Juan Basin were significantly higher than elsewhere, ranging from \$0.31 per MMBtu to \$0.46 per MMBtu. The extent of these deductions had a significant impact on the net average index price at the wellhead for the San Juan Basin, which was \$1.25 per MMBtu in 1994 and only \$0.74 per MMBtu in 1995.

The estimated impact on revenues was determined not only by the difference between index and the safety net, but also by how the index payor's gross proceeds compared to the safety net to which they must 'true up'. For example, in Wyoming, there was a consistent increase in the

estimated index value, the index payors' gross proceeds, and the safety net in both years. However, because the safety net calculated for 1994 was so much greater than the index payors' gross proceeds, MMS would gain revenues exceeding their gross proceeds under the 'true up' requirement. Even in several cases where index exceeded the safety net (GOM zones 1, 2, and 5 in 1995), the net effect was a revenue loss because of the strength of the index payors' gross proceeds.

As a general trend, the safety net calculation exceeded the weighted average index value for each year for most zones. Therefore, some additional revenues in excess of index would be generated under the 'true up'. However, because the index payors' gross proceeds usually exceeded both the index price and the estimated safety net, any true-up required would not compensate for the loss resulting from payors choosing index over gross proceeds. As this result shows, the larger companies who would most likely convert to index received the highest prices for their production. The smaller companies whose gross proceeds would make up the basis of the safety net calculation generally received lower prices. This result did not hold for all cases; in Wyoming the safety net exceeded gross proceeds in both years for those payors assumed to choose index price valuation. Also worth noting is the fact that when index prices in Wyoming fell in 1995, both the gross proceeds of the payors assumed to choose index price valuation and the gross proceeds of the remaining payors remained strong in comparison to the index value. By contrast, in the San Juan Basin the gross proceeds of payors assumed to remain on gross proceeds fell nearly as low as index, while the gross proceeds remained strong for payors assumed to choose index. The most notable finding in this area is that in 10 out of the 14 cases, the annualized index prices were exceeded by all annualized prices derived from gross proceeds, including both the safety net and the index payors' gross proceeds. This result suggests that for both large and small companies, most of their Federal gas sold for amounts in excess of the index price.

The results of this study offer two conclusions:

- (1) For most gas sold by payors both large and small, actual prices received for gas were greater than the index price; and
- (2) Allowing payors to pay royalties based on index instead of gross proceeds would result in an overall loss in royalty revenue.

Supplemental Study

A supplemental study addressed the impact on royalties of selecting a different population of assumed index payors. Instead of selecting index payors based on company size or royalties paid, index payors were selected by assuming that any payor whose net annualized gross proceeds exceeded the net index based value in each zone would choose to pay on index.

Of course, this approach would guarantee a loss in revenues. However, in some cases the estimated losses may not be as great if certain large payors received prices for their gas less than the index price. The purpose of this study was primarily to assess a "worst case" scenario.

The revenue impacts of this study are much more dramatic than under the original analysis with losses in the GOM of \$52 Million in 1994 and \$30 Million in 1995; in the San Juan Basin of \$8.7 Million in 1994 and \$9.9 Million in 1995; and in Wyoming of \$1.5 Million in 1994 and \$1.2 Million in 1995. This is a total loss of over \$100 Million over the two-year period.

ANALYSIS #3: ROYALTY IMPACT OF OPTION 3 -USING INDEX + A PERCENTAGE FACTOR AS A VARIATION OF THE PROPOSED FEDERAL GAS VALUATION RULE

Introduction

This analysis studies the effect on Federal gas royalties if those payors choosing to pay on index prices were required to pay on index plus a percentage of index (index + X). The analysis rests on the assumption that the same payors choosing to pay royalties based on index prices in Analysis #2 would choose this modified version of index price valuation. This analysis studies the same seven zones for the same years as under Analysis #2. All data used in this analysis also are the same as those used under Analysis #2. The objective of the index + X method is to preserve the amount of revenues MMS currently receives under gross proceeds; that is, achieve revenue neutrality.

The index + X method would require payors who choose index-based valuation to pay an increment above (or below) the index price. The increment would be based on the percentage difference between the payors' annual gross proceeds and the average index value. The increment, or percentage factor, to be applied to the current year's index prices would be calculated from the previous year's data. For example, the percentage factor to be added to the 1995 index prices would be computed from the percentage difference between the index payors' annual gross proceeds received under actual sales in 1994 (including affiliate sales) and the 1994 average index price. Because the previous year's data is necessary to compute index + X for the current year, the estimates in this analysis were performed for 1995 only.

The percentage factor X would incorporate transportation costs from the wellhead to the point of sale. Therefore, when the percentage factor is applied to index, the costs of transportation are already factored into the estimate and no additional transportation allowances would be permitted as a deduction from the index price for royalty purposes. This method would also eliminate the need for assumptions concerning transportation costs to index points when calculating the percentage.

To determine the new index + X prices for the 1995 royalties, the percentage factor would first be multiplied by the applicable 1995 index price and the product would be added to the applicable index price. The royalty impact of using the index + X method would be determined by the computing the difference between the 1995 weighted average gross proceeds price for index payors and the new index + X price, multiplied by the 1995 royalty quantity of gas sold by the index payors.

Procedures and Assumptions

1. Use the same data from Analysis #2.
2. Calculate the 1994 Weighted Average Index Value for each zone:
 - (a) Use the monthly average index prices without making any allowance for transportation costs. For each month, multiply the average index price by the total monthly royalty volume of gas sold by index payors to determine the index-based royalty value for each month..
 - (b) Calculate the total of the monthly royalty quantities for the year, and total of the monthly index-based royalty values for the year. Divide the total index-based royalty value by the total royalty volume of gas sold to determine the weighted average index-based value for 1994. This value is not netted at the wellhead for transportation.
3. Use the 1994 Weighted Average Gross Proceeds Price for Index Payors from Analysis #2.
4. Calculate the 1995 Weighted Average Index Value for each zone using the same procedure as under 2.
5. Use the 1995 Weighted Average Gross Proceeds Price for Index Payors from Analysis #2.
6. Calculate the Index Percentage Factor for 1995 using values from 1994:

[1994 weighted average gross proceeds price for index payors minus 1994 weighted average index value]; this value is then divided by the 1994 weighted average index value.
7. Calculate the new index + X price for 1995:

[1995 Index + [Index Percentage Factor x 1995 Index]]
8. Calculate the royalty impact:

Royalty impact = [1995 weighted average gross proceeds price for index payors - new index + X price] x [1995 royalty volume of gas sold by the payors using index prices]

Under this formula, a positive value indicates a loss in revenues (an actual loss in royalties); a negative value means revenues would be gained (not loss in royalties). Appendix D shows the royalty impact for each zone in 1995.

Analysis Results

Because of the lag in applying the previous year's index percentage factor to the current year's index prices, the results of this analysis cannot be directly compared with the results obtained in

Analysis #2. Under this method, the impact is always carried forward one year. Therefore, true revenue neutrality for each zone would occur only after several successive years of applying a previous year's index percentage factor. However, this analysis (Analysis # 3) shows that even for a single year's study this method has much less of an impact on revenues. For all zones, the impact of this option was less than a \$1 Million gain in revenues.

The San Juan Basin showed the largest estimated gain in revenues of all zones for 1995 with an increase \$1.1 Million. Simply put, this increase was a result of the index + X price being greater than the gross proceeds paid by the payors assumed to switch to index based valuation. Put more subtly, this result occurs it was because the estimated price differential between the index price and gross proceeds increased from 20% in 1994 to 23% in 1995. However, in 1995 the index payors would only be able to deduct 20% from the index price based on 1994 data rather than the 23% differential they realized in the market place. In the subsequent year, the percentage factor would increase for 1996 index prices, resulting in a greater deduction from index and a smaller of revenue gain or possibility of a loss.

In Wyoming a slight loss in revenues occurred (\$.1 Million) for 1995. This result is explained by the percentage factor of 7.59% reduces the index price to \$1.006, which is just below the gross proceeds price of \$1.02. However, the reverse effect would occur for 1996 when the percentage factor, and the resulting deduction from index, would decrease to 6.4%.

For the total of the five zones in the GOM, royalty revenues decreased slightly (\$.09 Million) using index + X for 1995. Zones 1 and 2 showed gains of about \$.62 Million and \$1.1 Million, respectively; while zones 3, 4, and 5 showed losses of about \$1.2 Million, \$.26 Million, and \$.33 Million, respectively. Once again, it can be concluded that the percentage factors for 1996 would reverse these results to some degree.

It must be noted that the one overriding factor controlling the ultimate outcome of the percentage factor is the gross proceeds received by index payors in relation to index prices. If the variations in their gross proceeds are not consistent with the variations in index, the outcome of the percentage factor and the resulting revenues are much less predictable.

In conclusion, regardless of idiosyncrasies in the percentage factor, this option results in far more neutrality in royalty revenues than option 2.

SECTION 8. OTHER IMPACTS

For options #2 and #3, other indirect impacts would necessarily occur in addition to the direct impact on mineral revenues received by the federal government. These impacts are not easily quantifiable, but are primarily administrative. Specific elements of these impacts include the following:

(1) Industry Costs

The MMS asked industry representatives to quantify the changes in reporting costs which

appear likely from the new rule. Data to estimate costs are unavailable. However, one company intimately involved with the development of the rule estimated costs of about \$1.0 Million to comply with the current gross proceeds rule under today's market environment. These costs were for the development of a new automated system to assure proper tracing of pooled gas sales to individual federal leases. Generally, these costs are one-time in nature, as existing personnel will continue the day-to-day aspects of compliance with MMS reporting and valuation requirements. Several industry representatives indicated that using index valuation would reduce the amount of personnel needed to compute Federal royalties.

(2) MMS Costs

Most MMS costs will be related to changes in reporting and verification procedures under the new valuation rules. A detailed analysis quantifying the costs was not performed. The team discussed the differences and similarities of the potential impacts of this rule and the gas-in-kind marketing pilot recently completed by the MMS. The team reviewed the impacts and estimated costs from the MMS Royalty Gas Marketing Pilot Report. The team decided that for purposes of this analysis, the impacts on the MMS were similar enough to be substituted. The estimated impacts on the MMS are therefore, \$3.6M.

(3) Workload increases

There will be initial minor increases in this component. However, one of the major benefits of an index based rule is the avoidance of the increased compliance costs borne by lessees. MMS costs related to regulatory compliance (particularly audit) should decrease over time as the audit periods and effective period of the rule overlap. It can be argued that the effect of this savings will simply provide the auditors with more time to concentrate on other audit issue or an ability to expand their audit coverage.

(4) Simplification

Quantification of the desired positive effect of simplification is not possible. A case can be made that the rule in its current form probably has a positive impact on some payors, but places a corresponding burden on MMS. MMS must have some verification processes to assure accurate reporting irrespective of whether payors may be paying on gross proceeds or on an index valuation methodology. The requirement that MMS calculate a safety net value and require a 'true up' to the safety net value places additional burdens on both industry and MMS. The details of calculating a safety-net value, notifying lessees of the value, and assuring additional payment of royalties are complicated and costly. Moreover, these changes will involve corresponding litigation costs. Quite possibly, the net effect of a new rule will be the reallocation of resources with few significant long-term increases or decreases costs or benefits experienced by either industry or MMS.

Overall, the monetary effect of these indirect impacts is thought to be negligible in comparison to the royalty revenue effect of the rule. Additionally, all of the indirect impacts identified here are thought to involve net costs except for the effects of simplification. In any case these indirect impacts are not of the same order of magnitude as the royalty collection impacts.

SECTION 9. RECOMMENDATION

Recommendation: Option #3 - Index + X

Reasons: From the standpoint of cost savings and minimal impact to all parties, Option #3 is the only viable option. Option #1 is too burdensome in that it requires lessees to calculate and trace gross proceeds for sales from 'pools' back to individual Federal leases. Option #2 is estimated to result in a considerable loss of revenues. It would subject MMS to severe losses if lessees deliberately choose index to minimize royalty obligations, and it would treat unfairly the small payors who have no interest in valuation based on the use of price indexes.

Of the three options, Option #3 imposes the least costs to all affected parties. Although this option would impose some additional administrative burden on MMS, much of these costs, or similar costs, would also be incurred under Option #2 in computing a safety net. And although certain payors may be legally opposed to MMS collecting sales information from affiliates, such collection would be required under Option #2 if a zone were not to have a representative sample from which to compute a safety net. As an advantage over Option #2, option # 3 targets only the index payors who benefit from the rule in providing information to compute the percentage factor. Payors choosing not to pay on index prices would not be subjected to additional auditing or reporting requirements associated with Option #3. This option also provides a big advantage to large companies who currently must trace back to the individual Federal leases their gross proceeds from sales out of pools. Under this option, companies have the administrative ease of paying up front on an adjusted index price which means that they would not owe additional royalties under a deferred safety net calculation. Under this option, both MMS and payors would also have the simplification of not dealing with transportation allowances.

Finally, Option #3 exposes MMS to minimal revenue impacts. In fact, the percentage factor protects both MMS and payors from severe revenue losses or gains.

Appendix A

Assumed Index Payors by Zone

Gulf of Mexico

Amerada Hess
Amoco Production
Apache Corporation
ARCO Oil & Gas
Chevron USA
Conoco Inc.
Enron Oil & Gas Co.
Exxon
Fina Oil Co.
Kerr-McGee
Marathon Oil
Meridian Oil
Mobil Oil
Oryx Energy
Pennzoil
Petrofina
Samedan Oil
Shell
Texaco
Union Oil (Unocal)

San Juan Basin

Amerada Hess
Amoco Production
ARCO Oil & Gas
Conoco Inc.
Kerr-McGee
Marathon Oil
Meridian Oil
Mobil Oil
Texaco
Union Oil (Unocal)

Wyoming

Amoco Production
Apache Corporation
Chevron USA
Conoco Inc.
Enron Oil & Gas Co.
Exxon
Marathon Oil
Meridian Oil
Mobil Oil
Oryx Energy
Oxy USA Inc.
Phillips Petroleum
Texaco
Union Oil (Unocal)

1994 INDEX PRICES FOR THE GULF OF MEXICO

Inside FERC

Natural Gas Intelligence

<u>ZONE 1</u>	<u>Jan-94</u>	<u>Feb-94</u>	<u>Mar-94</u>	<u>Apr-94</u>	<u>May-94</u>	<u>Jun-94</u>	<u>Jul-94</u>	<u>Aug-94</u>	<u>Sep-94</u>	<u>Oct-94</u>	<u>Nov-94</u>	<u>Dec-94</u>	<u>Jan-94</u>	<u>Feb-94</u>	<u>Mar-94</u>	<u>Apr-94</u>	<u>May-94</u>	<u>Jun-94</u>	<u>Jul-94</u>	<u>Aug-94</u>	<u>Sep-94</u>	<u>Oct-94</u>	<u>Nov-94</u>	<u>Dec-94</u>
Florida Gas Zone 1	\$2.03	\$2.25	\$2.20	\$1.88	\$1.98	\$1.74	\$1.88	\$1.71		\$1.36	\$1.57	\$1.61												
Texas Eastern South TX	\$1.94	\$2.20	\$2.18	\$1.87	\$1.99	\$1.73	\$1.88	\$1.71	\$1.41	\$1.34	\$1.60	\$1.61	\$2.00	\$2.23	\$2.19	\$1.87	\$2.00	\$1.74	\$1.85	\$1.71	\$1.42	\$1.34	\$1.62	\$1.61
Transco Zone 1	\$2.02	\$2.32	\$2.32	\$1.93	\$2.02	\$1.81	\$1.92	\$1.76	\$1.43	\$1.35	\$1.61	\$1.65	\$1.93	\$2.21	\$2.18	\$1.80	\$2.01	\$1.71	\$1.81	\$1.71	\$1.36	\$1.31	\$1.53	\$1.54
<u>ZONE 2</u>																								
ANR Offshore	\$2.03	\$2.33	\$2.31	\$1.93	\$2.01	\$1.72	\$1.85	\$1.70	\$1.40	\$1.36	\$1.61	\$1.60	\$2.04	\$2.33	\$2.32	\$1.93	\$2.01	\$1.74	\$1.86	\$1.70	\$1.41	\$1.35	\$1.61	\$1.60
Columbia Gulf LA	\$2.05	\$2.36	\$2.35	\$1.99	\$2.05	\$1.81	\$1.94	\$1.77	\$1.45	\$1.39	\$1.67	\$1.65	\$2.10	\$2.39	\$2.36	\$1.98	\$2.08	\$1.81	\$1.93	\$1.77	\$1.46	\$1.38	\$1.67	\$1.67
Florida Gas Zone 1	\$2.03	\$2.25	\$2.20	\$1.88	\$1.98	\$1.74	\$1.88	\$1.71		\$1.36	\$1.57	\$1.61												
NGPL LA	\$1.98	\$2.28	\$2.25	\$1.92	\$2.00	\$1.74	\$1.86	\$1.72	\$1.43	\$1.36	\$1.61	\$1.61	\$2.03	\$2.31	\$2.30	\$1.94	\$2.02	\$1.75	\$1.85	\$1.71	\$1.45	\$1.36	\$1.62	\$1.62
Tennessee LA & offshore	\$1.98	\$2.31	\$2.32	\$1.92	\$2.00	\$1.73	\$1.87	\$1.70	\$1.40	\$1.35	\$1.62	\$1.64	\$1.98	\$2.32	\$2.31	\$1.92	\$1.99	\$1.74	\$1.86	\$1.71	\$1.41	\$1.35	\$1.63	\$1.62
Tennessee TX	\$1.94	\$2.18	\$2.17	\$1.85	\$1.98	\$1.70	\$1.84	\$1.68	\$1.38	\$1.33	\$1.62	\$1.60	\$1.94	\$2.20	\$2.20	\$1.86	\$1.98	\$1.72	\$1.83	\$1.70	\$1.39	\$1.33	\$1.62	\$1.61
Texas Eastern South TX	\$1.94	\$2.20	\$2.18	\$1.87	\$1.99	\$1.73	\$1.88	\$1.71	\$1.41	\$1.34	\$1.60	\$1.61	\$2.00	\$2.23	\$2.19	\$1.87	\$2.00	\$1.74	\$1.85	\$1.71	\$1.42	\$1.34	\$1.62	\$1.61
Transco Zone 2	\$2.03	\$2.36	\$2.36	\$1.97	\$2.04	\$1.83	\$1.93	\$1.80	\$1.47	\$1.39	\$1.66	\$1.66	\$2.04	\$2.35	\$2.34	\$1.96	\$2.05	\$1.85	\$1.93	\$1.80	\$1.46	\$1.40	\$1.66	\$1.66
<u>ZONE 3</u>																								
ANR LA	\$2.04	\$2.33	\$2.32	\$1.93	\$2.01	\$1.74	\$1.85	\$1.70	\$1.40	\$1.35	\$1.61	\$1.60	\$2.04	\$2.33	\$2.32	\$1.93	\$2.01	\$1.74	\$1.86	\$1.70	\$1.41	\$1.35	\$1.61	\$1.60
ANR Offshore	\$2.03	\$2.33	\$2.31	\$1.93	\$2.01	\$1.72	\$1.85	\$1.70	\$1.40	\$1.36	\$1.61	\$1.60	\$2.04	\$2.33	\$2.32	\$1.93	\$2.01	\$1.74	\$1.86	\$1.70	\$1.41	\$1.35	\$1.61	\$1.60
Columbia Gulf Offshore	\$2.02		\$2.28	\$1.91		\$1.73	\$1.87	\$1.71		\$1.29		\$1.56	\$2.01	\$2.29	\$2.27	\$1.90	\$1.99	\$1.72	\$1.87	\$1.69	\$1.39	\$1.32	\$1.59	\$1.59
Florida Gas Zone 2	\$2.08	\$2.34	\$2.33	\$1.93	\$2.05	\$1.83	\$1.94	\$1.78	\$1.47	\$1.41	\$1.68	\$1.67	\$2.08	\$2.37	\$2.33	\$1.95	\$2.07	\$1.82	\$1.88	\$1.78	\$1.46	\$1.42	\$1.68	\$1.68
Koch LA	\$1.92	\$2.14	\$2.19	\$1.89	\$1.94	\$1.70	\$1.85	\$1.68	\$1.39	\$1.31	\$1.57	\$1.58	\$1.99	\$2.20	\$2.28	\$1.88	\$1.94	\$1.72	\$1.89	\$1.72	\$1.44	\$1.33	\$1.61	\$1.61
NGPL LA	\$1.98	\$2.28	\$2.25	\$1.92	\$2.00	\$1.74	\$1.86	\$1.72	\$1.43	\$1.36	\$1.61	\$1.61	\$2.03	\$2.31	\$2.30	\$1.94	\$2.02	\$1.75	\$1.85	\$1.71	\$1.45	\$1.36	\$1.62	\$1.62
Tennessee LA & Offshore	\$1.98	\$2.31	\$2.32	\$1.92	\$2.00	\$1.73	\$1.87	\$1.70	\$1.40	\$1.35	\$1.62	\$1.64	\$1.98	\$2.32	\$2.31	\$1.92	\$1.99	\$1.74	\$1.86	\$1.71	\$1.41	\$1.35	\$1.63	\$1.62
Texas Eastern E. LA	\$2.00	\$2.35	\$2.35	\$1.96	\$2.05	\$1.81	\$1.93	\$1.76	\$1.45	\$1.38	\$1.66	\$1.65	\$2.05	\$2.38	\$2.34	\$1.97	\$2.07	\$1.82	\$1.92	\$1.77	\$1.45	\$1.38	\$1.68	\$1.66
Texas Eastern W. LA	\$2.00	\$2.35	\$2.35	\$1.96	\$2.05	\$1.81	\$1.93	\$1.76	\$1.45	\$1.38	\$1.66	\$1.65	\$2.04	\$2.35	\$2.32	\$1.94	\$2.05	\$1.81	\$1.91	\$1.75	\$1.44	\$1.37	\$1.66	\$1.64
Texas Gas Zone SL	\$2.03	\$2.32	\$2.32	\$1.93	\$2.03	\$1.77	\$1.91	\$1.75	\$1.44	\$1.37	\$1.63	\$1.64	\$2.04	\$2.34	\$2.33	\$1.95	\$2.04	\$1.78	\$1.91	\$1.76	\$1.45	\$1.38	\$1.65	\$1.64
Transco Zone 3	\$2.05	\$2.38	\$2.38	\$2.00	\$2.06	\$1.86	\$1.96	\$1.82	\$1.48	\$1.42	\$1.70	\$1.69	\$2.10	\$2.39	\$2.38	\$1.99	\$2.08	\$1.87	\$1.97	\$1.82	\$1.49	\$1.43	\$1.69	\$1.69
Trunkline Field Zone	\$1.99	\$2.28	\$2.30	\$1.94	\$2.01	\$1.75	\$1.87	\$1.71	\$1.41	\$1.37	\$1.60	\$1.60	\$2.05	\$2.34	\$2.32	\$1.93	\$2.02	\$1.76	\$1.86	\$1.73	\$1.42	\$1.35	\$1.60	\$1.60
<u>ZONE 4</u>																								
Columbia Gulf Offshore	\$2.02		\$2.28	\$1.91		\$1.73	\$1.87	\$1.71		\$1.29		\$1.56	\$2.01	\$2.29	\$2.27	\$1.90	\$1.99	\$1.72	\$1.87	\$1.69	\$1.39	\$1.32	\$1.59	\$1.59
Florida Gas Zone 2	\$2.08	\$2.34	\$2.33	\$1.93	\$2.05	\$1.83	\$1.94	\$1.78	\$1.47	\$1.41	\$1.68	\$1.67	\$2.08	\$2.37	\$2.33	\$1.95	\$2.07	\$1.82	\$1.88	\$1.78	\$1.46	\$1.42	\$1.68	\$1.68
Southern Natural LA	\$2.01	\$2.31	\$2.32	\$1.91	\$1.92	\$1.75	\$1.85	\$1.73	\$1.44	\$1.38	\$1.62	\$1.65	\$2.04	\$2.33	\$2.30	\$1.91	\$1.92	\$1.77	\$1.86	\$1.74	\$1.44	\$1.38	\$1.63	\$1.63
Transco Zone 3	\$2.05	\$2.38	\$2.38	\$2.00	\$2.06	\$1.86	\$1.96	\$1.82	\$1.48	\$1.42	\$1.70	\$1.69	\$2.10	\$2.39	\$2.38	\$1.99	\$2.08	\$1.87	\$1.97	\$1.82	\$1.49	\$1.43	\$1.69	\$1.69
<u>ZONE 5</u>																								
Florida Gas Zone 3	\$2.13	\$2.39	\$2.39	\$1.96	\$2.10	\$1.89	\$1.98	\$1.84	\$1.52	\$1.45	\$1.72	\$1.71												
Transco MS & AL	\$2.07	\$2.41	\$2.40	\$2.00	\$2.08	\$1.85	\$1.98	\$1.82	\$1.49	\$1.44	\$1.71	\$1.69	\$2.12	\$2.44	\$2.40	\$2.02	\$2.10	\$1.88	\$1.99	\$1.84	\$1.50	\$1.46	\$1.72	\$1.72

1995 INDEX PRICES FOR THE GULF OF MEXICO

Inside FERC

Natural Gas Intelligence

<u>ZONE 1</u>	<u>Jan-95</u>	<u>Feb-95</u>	<u>Mar-95</u>	<u>Apr-95</u>	<u>May-95</u>	<u>Jun-95</u>	<u>Jul-95</u>	<u>Aug-95</u>	<u>Sep-95</u>	<u>Oct-95</u>	<u>Nov-95</u>	<u>Dec-95</u>	<u>Jan-95</u>	<u>Feb-95</u>	<u>Mar-95</u>	<u>Apr-95</u>	<u>May-95</u>	<u>Jun-95</u>	<u>Jul-95</u>	<u>Aug-95</u>	<u>Sep-95</u>	<u>Oct-95</u>	<u>Nov-95</u>	<u>Dec-95</u>
Florida Gas Zone 1	\$1.54	\$1.34	\$1.36	\$1.49	\$1.60	\$1.65	\$1.44	\$1.31	\$1.48	\$1.56	\$1.70	\$2.10												
Texas Eastern South TX	\$1.53	\$1.32	\$1.35	\$1.47	\$1.58	\$1.62	\$1.41	\$1.29	\$1.48	\$1.56	\$1.69	\$2.09	\$1.54	\$1.32	\$1.35	\$1.48	\$1.60	\$1.63	\$1.41	\$1.28	\$1.48	\$1.55	\$1.69	\$2.10
Transco Zone 1	\$1.56	\$1.36	\$1.38	\$1.49	\$1.60	\$1.65	\$1.43	\$1.29	\$1.49	\$1.56	\$1.72	\$2.12	\$1.48	\$1.30	\$1.31	\$1.41	\$1.56	\$1.60	\$1.37	\$1.23	\$1.44	\$1.51	\$1.64	\$2.05
<u>ZONE 2</u>																								
ANR Offshore	\$1.54		\$1.37										\$1.54	\$1.35	\$1.37	\$1.49	\$1.60	\$1.65	\$1.45	\$1.30	\$1.51	\$1.59	\$1.73	\$2.18
Columbia Gulf LA	\$1.59	\$1.38	\$1.42	\$1.53	\$1.64	\$1.69	\$1.46	\$1.34	\$1.54	\$1.62	\$1.75	\$2.24	\$1.60	\$1.40	\$1.42	\$1.46	\$1.59	\$1.69	\$1.47	\$1.33	\$1.54	\$1.62	\$1.76	\$2.24
Florida Gas Zone 1	\$1.54	\$1.34	\$1.36	\$1.49	\$1.60	\$1.65	\$1.44	\$1.31	\$1.48	\$1.56	\$1.70	\$2.10												
NGPL LA	\$1.55	\$1.35	\$1.37	\$1.49	\$1.61	\$1.65	\$1.44	\$1.31	\$1.51	\$1.59	\$1.72	\$2.15	\$1.55	\$1.36	\$1.37	\$1.50	\$1.61	\$1.65	\$1.45	\$1.31	\$1.51	\$1.60	\$1.73	\$2.16
Tennessee LA & offshore	\$1.57	\$1.37	\$1.42	\$1.50	\$1.60	\$1.64	\$1.42	\$1.30	\$1.50	\$1.58	\$1.73	\$2.24	\$1.58	\$1.37	\$1.41	\$1.50	\$1.60	\$1.65	\$1.41	\$1.30	\$1.49	\$1.57	\$1.73	\$2.23
Tennessee TX	\$1.50	\$1.32	\$1.35	\$1.47	\$1.58	\$1.63	\$1.40	\$1.28	\$1.48	\$1.56	\$1.70	\$2.08	\$1.53	\$1.31	\$1.36	\$1.47	\$1.58	\$1.63	\$1.40	\$1.28	\$1.48	\$1.55	\$1.71	\$2.09
Texas Eastern South TX	\$1.53	\$1.32	\$1.35	\$1.47	\$1.58	\$1.62	\$1.41	\$1.29	\$1.48	\$1.56	\$1.69	\$2.09	\$1.54	\$1.32	\$1.35	\$1.48	\$1.60	\$1.63	\$1.41	\$1.28	\$1.48	\$1.55	\$1.69	\$2.10
Transco Zone 2	\$1.59	\$1.40	\$1.42	\$1.53	\$1.64	\$1.70	\$1.48	\$1.33	\$1.55	\$1.61	\$1.77	\$2.23	\$1.59	\$1.41	\$1.43	\$1.53	\$1.65	\$1.69	\$1.48	\$1.34	\$1.53	\$1.61	\$1.75	\$2.22
<u>ZONE 3</u>																								
ANR LA	\$1.54	\$1.35	\$1.37	\$1.48	\$1.61	\$1.66	\$1.45	\$1.30	\$1.51	\$1.60	\$1.73	\$2.18	\$1.54	\$1.35	\$1.37	\$1.49	\$1.60	\$1.65	\$1.45	\$1.30	\$1.51	\$1.59	\$1.73	\$2.18
ANR Offshore	\$1.54		\$1.37										\$1.54	\$1.35	\$1.37	\$1.49	\$1.60	\$1.65	\$1.45	\$1.30	\$1.51	\$1.59	\$1.73	\$2.18
Columbia Gulf Offshore	\$1.49	\$1.30	\$1.35	\$1.44	\$1.58	\$1.60							\$1.52	\$1.31	\$1.35	\$1.46	\$1.59	\$1.64	\$1.42	\$1.26	\$1.48	\$1.56	\$1.71	\$2.18
Florida Gas Zone 2	\$1.58	\$1.40	\$1.43	\$1.54	\$1.66	\$1.71	\$1.50	\$1.37	\$1.54	\$1.62	\$1.76	\$2.23	\$1.60	\$1.40	\$1.43	\$1.54	\$1.66	\$1.71	\$1.51	\$1.38	\$1.54	\$1.64	\$1.77	\$2.24
Koch LA	\$1.52	\$1.36	\$1.35	\$1.46	\$1.57	\$1.62	\$1.43	\$1.28	\$1.48	\$1.56	\$1.69	\$2.12	\$1.57	\$1.37	\$1.37	\$1.49	\$1.60	\$1.64	\$1.42	\$1.33	\$1.48	\$1.58	\$1.69	\$2.13
NGPL LA	\$1.55	\$1.35	\$1.37	\$1.49	\$1.61	\$1.65	\$1.44	\$1.31	\$1.51	\$1.59	\$1.72	\$2.15	\$1.55	\$1.36	\$1.37	\$1.50	\$1.61	\$1.65	\$1.45	\$1.31	\$1.51	\$1.60	\$1.73	\$2.16
Tennessee LA & offshore	\$1.57	\$1.37	\$1.42	\$1.50	\$1.60	\$1.64	\$1.42	\$1.30	\$1.50	\$1.58	\$1.73	\$2.24	\$1.58	\$1.37	\$1.41	\$1.50	\$1.60	\$1.65	\$1.41	\$1.30	\$1.49	\$1.57	\$1.73	\$2.23
Texas Eastern E. LA	\$1.59	\$1.40	\$1.43	\$1.54	\$1.65	\$1.69	\$1.46	\$1.34	\$1.54	\$1.61	\$1.76	\$2.26	\$1.62	\$1.41	\$1.43	\$1.51	\$1.65	\$1.69	\$1.47	\$1.33	\$1.54	\$1.62	\$1.77	\$2.26
Texas Eastern W. LA	\$1.56	\$1.36	\$1.40	\$1.51	\$1.63	\$1.68	\$1.44	\$1.33	\$1.52	\$1.59	\$1.74	\$2.22	\$1.58	\$1.37	\$1.40	\$1.52	\$1.62	\$1.66	\$1.45	\$1.32	\$1.53	\$1.59	\$1.74	\$2.21
Texas Gas Zone SL	\$1.57	\$1.38	\$1.40	\$1.51	\$1.62	\$1.67	\$1.46	\$1.32	\$1.53	\$1.61	\$1.76	\$2.24	\$1.58	\$1.39	\$1.41	\$1.56	\$1.63	\$1.68	\$1.46	\$1.32	\$1.52	\$1.62	\$1.76	\$2.24
Transco Zone 3	\$1.62	\$1.43	\$1.46	\$1.56	\$1.67	\$1.73	\$1.50	\$1.36	\$1.59	\$1.64	\$1.80	\$2.27	\$1.62	\$1.44	\$1.46	\$1.56	\$1.68	\$1.73	\$1.50	\$1.37	\$1.58	\$1.65	\$1.80	\$2.27
Trunkline Field Zone	\$1.53	\$1.33	\$1.35	\$1.50	\$1.61	\$1.65	\$1.44	\$1.30	\$1.50	\$1.59	\$1.73	\$2.20	\$1.54	\$1.33	\$1.36	\$1.50	\$1.61	\$1.65	\$1.43	\$1.29	\$1.50	\$1.59	\$1.73	\$2.18
<u>ZONE 4</u>																								
Columbia Gulf Offshore	\$1.49	\$1.30	\$1.35	\$1.44	\$1.58	\$1.60							\$1.52	\$1.31	\$1.35	\$1.46	\$1.59	\$1.64	\$1.42	\$1.26	\$1.48	\$1.56	\$1.71	\$2.18
Florida Gas Zone 2	\$1.58	\$1.40	\$1.43	\$1.54	\$1.66	\$1.71	\$1.50	\$1.37	\$1.54	\$1.62	\$1.76	\$2.23	\$1.60	\$1.40	\$1.43	\$1.54	\$1.66	\$1.71	\$1.51	\$1.38	\$1.54	\$1.64	\$1.77	\$2.24
Southern Natural LA	\$1.57	\$1.38	\$1.41	\$1.53	\$1.64	\$1.66	\$1.46	\$1.34	\$1.54	\$1.61	\$1.76	\$2.24	\$1.59	\$1.37	\$1.41	\$1.53	\$1.64	\$1.65	\$1.46	\$1.33	\$1.53	\$1.60	\$1.77	\$2.22
Transco Zone 3	\$1.62	\$1.43	\$1.46	\$1.56	\$1.67	\$1.73	\$1.50	\$1.36	\$1.59	\$1.64	\$1.80	\$2.27	\$1.62	\$1.44	\$1.46	\$1.56	\$1.68	\$1.73	\$1.50	\$1.37	\$1.58	\$1.65	\$1.80	\$2.27
<u>ZONE 5</u>																								
Florida Gas Zone 3	\$1.62	\$1.47	\$1.46	\$1.56	\$1.67	\$1.72	\$1.49	\$1.37	\$1.55	\$1.62	\$1.76	\$2.24												
Transco MS & AL	\$1.62	\$1.45	\$1.45	\$1.58	\$1.68	\$1.74	\$1.51	\$1.39	\$1.59	\$1.65	\$1.82	\$2.29	\$1.64	\$1.46	\$1.47	\$1.58	\$1.68	\$1.74	\$1.51	\$1.38	\$1.59	\$1.66	\$1.82	\$2.28

1994 & 1995 - GOM INDEX PRICES NET OF TRANSPORTATION

	<u>Jan-94</u>	<u>Feb-94</u>	<u>Mar-94</u>	<u>Apr-94</u>	<u>May-94</u>	<u>Jun-94</u>	<u>Jul-94</u>	<u>Aug-94</u>	<u>Sep-94</u>	<u>Oct-94</u>	<u>Nov-94</u>	<u>Dec-94</u>	<u>Jan-95</u>	<u>Feb-95</u>	<u>Mar-95</u>	<u>Apr-95</u>	<u>May-95</u>	<u>Jun-95</u>	<u>Jul-95</u>	<u>Aug-95</u>	<u>Sep-95</u>	<u>Oct-95</u>	<u>Nov-95</u>	<u>Dec-95</u>
<u>ZONE 1</u>																								
Average Index	\$1.98	\$2.24	\$2.21	\$1.87	\$2.00	\$1.75	\$1.87	\$1.72	\$1.41	\$1.34	\$1.59	\$1.60	\$1.53	\$1.33	\$1.35	\$1.47	\$1.59	\$1.63	\$1.41	\$1.28	\$1.47	\$1.55	\$1.69	\$2.09
Average MMS Transportation	\$0.11	\$0.12	\$0.10	\$0.11	\$0.11	\$0.11	\$0.12	\$0.12	\$0.11	\$0.11	\$0.11	\$0.11	\$0.09	\$0.09	\$0.09	\$0.09	\$0.09	\$0.10	\$0.10	\$0.11	\$0.10	\$0.10	\$0.10	\$0.10
Net Index-based Price	\$1.87	\$2.13	\$2.11	\$1.76	\$1.89	\$1.64	\$1.75	\$1.60	\$1.29	\$1.23	\$1.48	\$1.49	\$1.44	\$1.24	\$1.26	\$1.38	\$1.50	\$1.53	\$1.31	\$1.18	\$1.37	\$1.45	\$1.59	\$1.99
<u>ZONE 2</u>																								
Average Index	\$2.01	\$2.29	\$2.28	\$1.92	\$2.01	\$1.76	\$1.88	\$1.73	\$1.42	\$1.36	\$1.63	\$1.62	\$1.56	\$1.36	\$1.38	\$1.49	\$1.61	\$1.66	\$1.44	\$1.31	\$1.51	\$1.58	\$1.73	\$2.17
Average MMS Transportation	\$0.14	\$0.14	\$0.14	\$0.12	\$0.12	\$0.12	\$0.11	\$0.12	\$0.11	\$0.11	\$0.12	\$0.12	\$0.12	\$0.14	\$0.14	\$0.14	\$0.13	\$0.13	\$0.13	\$0.13	\$0.13	\$0.13	\$0.14	\$0.14
Net Index-based Price	\$1.87	\$2.16	\$2.14	\$1.80	\$1.89	\$1.64	\$1.77	\$1.61	\$1.32	\$1.25	\$1.50	\$1.50	\$1.43	\$1.22	\$1.25	\$1.36	\$1.48	\$1.52	\$1.31	\$1.17	\$1.37	\$1.46	\$1.59	\$2.03
<u>ZONE 3</u>																								
Average Index	\$2.02	\$2.32	\$2.31	\$1.94	\$2.02	\$1.77	\$1.89	\$1.73	\$1.43	\$1.36	\$1.63	\$1.63	\$1.56	\$1.37	\$1.39	\$1.51	\$1.62	\$1.67	\$1.45	\$1.32	\$1.52	\$1.60	\$1.74	\$2.21
Average MMS Transportation	\$0.09	\$0.09	\$0.08	\$0.08	\$0.08	\$0.08	\$0.08	\$0.08	\$0.08	\$0.09	\$0.08	\$0.08	\$0.08	\$0.09	\$0.09	\$0.09	\$0.08	\$0.09	\$0.09	\$0.09	\$0.09	\$0.09	\$0.09	\$0.09
Net Index-based Price	\$1.93	\$2.23	\$2.23	\$1.86	\$1.94	\$1.69	\$1.81	\$1.65	\$1.35	\$1.28	\$1.55	\$1.55	\$1.48	\$1.28	\$1.31	\$1.42	\$1.54	\$1.57	\$1.37	\$1.23	\$1.43	\$1.51	\$1.65	\$2.12
<u>ZONE 4</u>																								
Average Index	\$2.05	\$2.34	\$2.32	\$1.94	\$2.01	\$1.79	\$1.90	\$1.76	\$1.45	\$1.38	\$1.66	\$1.65	\$1.57	\$1.38	\$1.41	\$1.52	\$1.64	\$1.68	\$1.48	\$1.34	\$1.54	\$1.62	\$1.77	\$2.24
Average MMS Transportation	\$0.09	\$0.09	\$0.09	\$0.07	\$0.06	\$0.06	\$0.07	\$0.07	\$0.07	\$0.09	\$0.11	\$0.11	\$0.08	\$0.09	\$0.07	\$0.08	\$0.08	\$0.08	\$0.08	\$0.08	\$0.08	\$0.08	\$0.09	\$0.09
Net Index-based Price	\$1.95	\$2.25	\$2.23	\$1.87	\$1.95	\$1.73	\$1.83	\$1.69	\$1.38	\$1.29	\$1.55	\$1.54	\$1.49	\$1.29	\$1.34	\$1.44	\$1.56	\$1.60	\$1.40	\$1.26	\$1.47	\$1.54	\$1.68	\$2.14
<u>ZONE 5</u>																								
Average Index	\$2.11	\$2.41	\$2.40	\$1.99	\$2.09	\$1.87	\$1.98	\$1.83	\$1.50	\$1.45	\$1.72	\$1.71	\$1.63	\$1.46	\$1.46	\$1.57	\$1.68	\$1.73	\$1.50	\$1.38	\$1.58	\$1.64	\$1.80	\$2.27
Average MMS Transportation	\$0.08	\$0.08	\$0.08	\$0.07	\$0.08	\$0.08	\$0.08	\$0.08	\$0.09	\$0.09	\$0.08	\$0.09	\$0.10	\$0.10	\$0.15	\$0.09	\$0.08	\$0.08	\$0.08	\$0.09	\$0.08	\$0.08	\$0.09	\$0.09
Net Index-based Price	\$2.03	\$2.33	\$2.32	\$1.93	\$2.01	\$1.80	\$1.91	\$1.75	\$1.41	\$1.36	\$1.63	\$1.62	\$1.53	\$1.36	\$1.31	\$1.49	\$1.59	\$1.66	\$1.42	\$1.30	\$1.50	\$1.56	\$1.71	\$2.19

San Juan Basin Index Prices

	<u>Jan-94</u>	<u>Feb-94</u>	<u>Mar-94</u>	<u>Apr-94</u>	<u>May-94</u>	<u>Jun-94</u>	<u>Jul-94</u>	<u>Aug-94</u>	<u>Sep-94</u>	<u>Oct-94</u>	<u>Nov-94</u>	<u>Dec-94</u>	<u>Jan-95</u>	<u>Feb-95</u>	<u>Mar-95</u>	<u>Apr-95</u>	<u>May-95</u>	<u>Jun-95</u>	<u>Jul-95</u>	<u>Aug-95</u>	<u>Sep-95</u>	<u>Oct-95</u>	<u>Nov-95</u>	<u>Dec-95</u>
Inside FERC El Paso	\$1.94	\$1.82	\$1.98	\$1.73	\$1.74	\$1.48	\$1.58	\$1.54	\$1.43	\$1.20	\$1.46	\$1.63	\$1.45	\$1.09	\$1.08	\$1.09	\$1.17	\$1.17	\$1.05	\$1.02	\$1.19	\$1.24	\$1.25	\$1.34
NGI El Paso	\$1.93	\$1.81	\$1.98	\$1.72	\$1.73	\$1.47	\$1.58	\$1.55	\$1.43	\$1.21	\$1.46	\$1.62	\$1.45	\$1.11	\$1.08	\$1.09	\$1.17	\$1.17	\$1.05	\$1.02	\$1.19	\$1.23	\$1.26	\$1.34
Average	\$1.94	\$1.82	\$1.98	\$1.73	\$1.74	\$1.48	\$1.58	\$1.55	\$1.43	\$1.21	\$1.46	\$1.63	\$1.45	\$1.10	\$1.08	\$1.09	\$1.17	\$1.17	\$1.05	\$1.02	\$1.19	\$1.24	\$1.26	\$1.34
Inside FERC Northwest Pipeline	\$1.92	\$1.78	\$1.95	\$1.61	\$1.60	\$1.37	\$1.46	\$1.45	\$1.36	\$1.18	\$1.48	\$1.61	\$1.37	\$1.06	\$1.05	\$1.05	\$1.06	\$1.14	\$0.98	\$0.84	\$0.96	\$1.05	\$1.25	\$1.31
NGI Northwest Pipeline	\$1.89	\$1.77	\$1.95	\$1.62	\$1.60	\$1.37	\$1.46	\$1.45	\$1.36	\$1.17	\$1.47	\$1.61	\$1.37	\$1.07	\$1.05	\$1.04	\$1.07	\$1.13	\$0.98	\$0.85	\$0.95	\$1.05	\$1.25	\$1.33
Average	\$1.91	\$1.78	\$1.95	\$1.62	\$1.60	\$1.37	\$1.46	\$1.45	\$1.36	\$1.18	\$1.48	\$1.61	\$1.37	\$1.07	\$1.05	\$1.05	\$1.07	\$1.14	\$0.98	\$0.85	\$0.96	\$1.05	\$1.25	\$1.32
Weighted Average Index Price- 60% El Paso/40% Northwest	\$1.92	\$1.80	\$1.97	\$1.68	\$1.68	\$1.43	\$1.53	\$1.51	\$1.40	\$1.19	\$1.47	\$1.62	\$1.42	\$1.09	\$1.07	\$1.07	\$1.13	\$1.16	\$1.02	\$0.95	\$1.10	\$1.16	\$1.25	\$1.33
Average MMS Transportation	\$0.33	\$0.34	\$0.35	\$0.33	\$0.34	\$0.33	\$0.32	\$0.31	\$0.33	\$0.46	\$0.44	\$0.44	\$0.44	\$0.42	\$0.42	\$0.41	\$0.43	\$0.41	\$0.38	\$0.41	\$0.43	\$0.40	\$0.41	\$0.42
Net Average Index-based Price	\$1.60	\$1.46	\$1.62	\$1.35	\$1.34	\$1.10	\$1.21	\$1.19	\$1.08	\$0.73	\$1.03	\$1.18	\$0.98	\$0.67	\$0.65	\$0.66	\$0.70	\$0.75	\$0.64	\$0.55	\$0.67	\$0.76	\$0.85	\$0.92

Wyoming Index Prices

	Jan-94	Feb-94	Mar-94	Apr-94	May-94	Jun-94	Jul-94	Aug-94	Sep-94	Oct-94	Nov-94	Dec-94	Jan-95	Feb-95	Mar-95	Apr-95	May-95	Jun-95	Jul-95	Aug-95	Sep-95	Oct-95	Nov-95	Dec-95
Inside FERC Northwest Pipeline	\$1.92	\$1.78	\$1.95	\$1.61	\$1.60	\$1.37	\$1.46	\$1.45	\$1.36	\$1.18	\$1.48	\$1.61	\$1.37	\$1.06	\$1.05	\$1.05	\$1.06	\$1.14	\$0.98	\$0.84	\$0.96	\$1.05	\$1.25	\$1.31
NGI Northwest Pipeline	\$1.89	\$1.77	\$1.95	\$1.62	\$1.60	\$1.37	\$1.46	\$1.45	\$1.36	\$1.17	\$1.47	\$1.61	\$1.37	\$1.07	\$1.05	\$1.04	\$1.07	\$1.13	\$0.98	\$0.85	\$0.95	\$1.05	\$1.25	\$1.33
Average	\$1.91	\$1.78	\$1.95	\$1.62	\$1.60	\$1.37	\$1.46	\$1.45	\$1.36	\$1.18	\$1.48	\$1.61	\$1.37	\$1.07	\$1.05	\$1.05	\$1.07	\$1.14	\$0.98	\$0.85	\$0.96	\$1.05	\$1.25	\$1.32
Inside FERC CIG	\$1.88	\$1.76	\$1.86	\$1.52	\$1.55	\$1.32	\$1.39	\$1.39	\$1.33	\$1.16	\$1.44	\$1.57	\$1.35	\$1.06	\$1.05	\$1.05	\$1.07	\$1.14	\$0.98	\$0.84	\$0.95	\$1.04	\$1.25	\$1.31
NGI CIG	\$1.86	\$1.76	\$1.87	\$1.52	\$1.56	\$1.31	\$1.39	\$1.39	\$1.34	\$1.15	\$1.44	\$1.57	\$1.34	\$1.06	\$1.05	\$1.05	\$1.07	\$1.14	\$0.97	\$0.84	\$0.95	\$1.04	\$1.25	\$1.32
Average	\$1.87	\$1.76	\$1.87	\$1.52	\$1.56	\$1.32	\$1.39	\$1.39	\$1.34	\$1.16	\$1.44	\$1.57	\$1.35	\$1.06	\$1.05	\$1.05	\$1.07	\$1.14	\$0.98	\$0.84	\$0.95	\$1.04	\$1.25	\$1.32
Inside FERC Questar	\$1.86	\$1.77	\$1.88	\$1.55	\$1.55	\$1.31	\$1.42	\$1.41	\$1.34	\$1.15	\$1.45	\$1.57	\$1.35	\$1.06	\$1.05	\$1.05	\$1.07	\$1.13	\$0.98	\$0.85	\$0.95	\$1.04	\$1.23	\$1.31
NGI Questar	\$1.85	\$1.76	\$1.86	\$1.57	\$1.57	\$1.30	\$1.42	\$1.40	\$1.34	\$1.16	\$1.45	\$1.57	\$1.35	\$1.06	\$1.05	\$1.05	\$1.06	\$1.14	\$0.97	\$0.83	\$0.95	\$1.04	\$1.25	\$1.31
Average	\$1.86	\$1.77	\$1.87	\$1.56	\$1.56	\$1.31	\$1.42	\$1.41	\$1.34	\$1.16	\$1.45	\$1.57	\$1.35	\$1.06	\$1.05	\$1.05	\$1.07	\$1.14	\$0.98	\$0.84	\$0.95	\$1.04	\$1.24	\$1.31
Average Index for 3 Pipelines	\$1.88	\$1.77	\$1.90	\$1.57	\$1.57	\$1.33	\$1.42	\$1.42	\$1.35	\$1.16	\$1.46	\$1.58	\$1.36	\$1.06	\$1.05	\$1.05	\$1.07	\$1.14	\$0.98	\$0.84	\$0.95	\$1.04	\$1.25	\$1.32
Average MMS Transportation	\$0.14	\$0.13	\$0.14	\$0.13	\$0.14	\$0.13	\$0.13	\$0.13	\$0.13	\$0.11	\$0.13	\$0.13	\$0.15	\$0.15	\$0.15	\$0.15	\$0.15	\$0.16	\$0.18	\$0.17	\$0.17	\$0.19	\$0.16	\$0.17
Net Average Index-based Price	\$1.74	\$1.64	\$1.75	\$1.44	\$1.43	\$1.20	\$1.29	\$1.28	\$1.21	\$1.05	\$1.33	\$1.45	\$1.21	\$0.91	\$0.91	\$0.90	\$0.91	\$0.97	\$0.80	\$0.67	\$0.78	\$0.85	\$1.09	\$1.14

1994 - ROYALTY IMPACT OF COMPARING GOM INDEX PRICES TO INDEX PAYORS' GROSS PROCEEDS

	<u>Jan-94</u>	<u>Feb-94</u>	<u>Mar-94</u>	<u>Apr-94</u>	<u>May-94</u>	<u>Jun-94</u>	<u>Jul-94</u>	<u>Aug-94</u>	<u>Sep-94</u>	<u>Oct-94</u>	<u>Nov-94</u>	<u>Dec-94</u>	
<u>ZONE 1</u>													AVG. OR TOTAL
Net Average Index-based Price	\$1.87	\$2.13	\$2.11	\$1.76	\$1.89	\$1.64	\$1.75	\$1.60	\$1.29	\$1.23	\$1.48	\$1.49	
A Royalty Quantity for Index Payors	5,803,600	5,179,863	5,679,855	5,443,409	5,650,012	5,051,296	5,429,225	5,197,641	4,922,875	4,748,281	5,481,051	5,698,669	64,285,777
Index-based Royalty Value	\$10,867,125	\$11,014,150	\$11,999,318	\$9,555,469	\$10,656,770	\$8,263,264	\$9,497,560	\$8,311,028	\$6,370,200	\$5,826,141	\$8,090,031	\$8,513,811	\$108,964,868
B Weighted Average Index Value													\$1.695
C Weighted Average Gross Proceeds Price for Index Payors													\$1.750
D Safety Net Median Value													\$1.750
Royalty Impact: A x (C - (.5(D-B)+B))													\$1,767,621
<u>ZONE 2</u>													
Net Average Index-based Price	\$1.87	\$2.16	\$2.14	\$1.80	\$1.89	\$1.64	\$1.77	\$1.61	\$1.32	\$1.25	\$1.50	\$1.50	
A Royalty Quantity for Index Payors	5,958,657	5,448,819	6,420,122	6,109,209	6,485,154	5,987,646	5,962,429	6,406,316	5,406,040	5,450,768	5,366,611	5,489,841	70,491,612
Index-based Royalty Value	\$11,114,882	\$11,749,470	\$13,728,361	\$11,010,831	\$12,269,911	\$9,793,793	\$10,525,675	\$10,301,356	\$7,126,705	\$6,788,023	\$8,066,016	\$8,249,401	\$120,724,424
B Weighted Average Index Value													\$1.713
C Weighted Average Gross Proceeds Price for Index Payors													\$1.742
D Safety Net Median Value													\$1.750
Royalty Impact: A x (C - (.5(D-B)+B))													\$754,015
<u>ZONE 3</u>													
Net Average Index-based Price	\$1.93	\$2.23	\$2.23	\$1.86	\$1.94	\$1.69	\$1.81	\$1.65	\$1.35	\$1.28	\$1.55	\$1.55	
A Royalty Quantity for Index Payors	10,470,001	10,578,553	12,500,030	11,409,645	10,690,745	9,944,911	9,871,529	10,082,791	6,921,864	6,928,567	7,171,349	8,355,181	114,925,166
Index-based Royalty Value	\$20,246,364	\$23,600,752	\$27,904,234	\$21,181,055	\$20,715,875	\$16,768,777	\$17,845,257	\$16,682,818	\$9,338,798	\$8,855,863	\$11,114,967	\$12,922,680	\$207,177,441
B Weighted Average Index Value													\$1.803
C Weighted Average Gross Proceeds Price for Index Payors													\$1.876
D Safety Net Median Value													\$1.820
Royalty Impact: A x (C - (.5(D-B)+B))													\$7,428,990
<u>ZONE 4</u>													
Net Average Index-based Price	\$1.95	\$2.25	\$2.23	\$1.87	\$1.95	\$1.73	\$1.83	\$1.69	\$1.38	\$1.29	\$1.55	\$1.54	
A Royalty Quantity for Index Payors	3,121,723	3,235,767	3,348,437	2,744,875	3,108,294	2,700,124	2,527,093	2,953,800	2,067,823	1,745,860	2,346,285	2,286,615	32,186,696
Index-based Royalty Value	\$6,102,188	\$7,291,108	\$7,472,874	\$5,131,544	\$6,063,838	\$4,673,240	\$4,632,161	\$4,979,368	\$2,861,572	\$2,257,833	\$3,633,725	\$3,521,387	\$58,620,838
B Weighted Average Index Value													\$1.821
C Weighted Average Gross Proceeds Price for Index Payors													\$2.216
D Safety Net Median Value													\$1.920
Royalty Impact: A x (C - (.5(D-B)+B))													\$11,116,071
<u>ZONE 5</u>													
Net Average Index-based Price	\$2.03	\$2.33	\$2.32	\$1.93	\$2.01	\$1.80	\$1.91	\$1.75	\$1.41	\$1.36	\$1.63	\$1.62	
A Royalty Quantity for Index Payors	1,214,971	1,147,681	1,161,617	1,317,608	1,311,793	816,485	1,255,101	1,182,362	1,144,992	1,110,532	1,186,353	1,224,402	14,073,897
Index-based Royalty Value	\$2,461,126	\$2,674,479	\$2,691,079	\$2,538,152	\$2,637,141	\$1,465,863	\$2,393,896	\$2,074,257	\$1,615,965	\$1,512,545	\$1,938,105	\$1,984,348	\$25,986,957
B Weighted Average Index Value													\$1.846
C Weighted Average Gross Proceeds Price for Index Payors													\$1.725
D Safety Net Median Value													\$1.690
Royalty Impact: A x (C - (.5(D-B)+B))													(\$608,449)

TOTAL \$20,458,248

1995 - ROYALTY IMPACT OF COMPARING GOM INDEX PRICES TO INDEX PAYORS' GROSS PROCEEDS

	<u>Jan-95</u>	<u>Feb-95</u>	<u>Mar-95</u>	<u>Apr-95</u>	<u>May-95</u>	<u>Jun-95</u>	<u>Jul-95</u>	<u>Aug-95</u>	<u>Sep-95</u>	<u>Oct-95</u>	<u>Nov-95</u>	<u>Dec-95</u>	
<u>ZONE 1</u>													AVG. OR TOTAL
Net Average Index-based Price	\$1.44	\$1.24	\$1.26	\$1.38	\$1.50	\$1.53	\$1.31	\$1.18	\$1.37	\$1.45	\$1.59	\$1.99	
A Royalty Quantity for Index Payors	4,991,949	4,344,857	4,728,950	4,436,852	4,403,201	4,370,245	3,933,963	4,036,333	4,204,550	4,306,513	4,285,023	4,370,110	52,412,546
Index-based Royalty Value	\$7,188,407	\$5,387,623	\$5,939,561	\$6,105,108	\$6,595,995	\$6,695,215	\$5,161,359	\$4,742,691	\$5,768,643	\$6,227,218	\$6,800,332	\$8,705,259	\$75,317,411
B Weighted Average Index Value													\$1.437
C Weighted Average Gross Proceeds Price for Index Payors													\$1.473
D Safety Net Median Value													\$1.390
Royalty Impact: A x (C - (.5(D-B)+B))													\$3,118,255
<u>ZONE 2</u>													
Net Average Index-based Price	\$1.43	\$1.22	\$1.25	\$1.36	\$1.48	\$1.52	\$1.31	\$1.17	\$1.37	\$1.46	\$1.59	\$2.03	
A Royalty Quantity for Index Payors	5,004,910	4,348,914	4,840,785	4,697,054	4,747,540	4,610,636	4,804,600	4,835,552	4,762,172	4,721,417	4,408,471	4,710,346	56,492,397
Index-based Royalty Value	\$7,177,041	\$5,310,645	\$6,049,368	\$6,367,192	\$7,006,013	\$7,012,777	\$6,285,103	\$5,677,629	\$6,537,102	\$6,872,360	\$6,990,575	\$9,556,619	\$80,842,424
B Weighted Average Index Value													\$1.431
C Weighted Average Gross Proceeds Price for Index Payors													\$1.465
D Safety Net Median Value													\$1.420
Royalty Impact: A x (C - (.5(D-B)+B))													\$2,230,548
<u>ZONE 3</u>													
Net Average Index-based Price	\$1.48	\$1.28	\$1.31	\$1.42	\$1.54	\$1.57	\$1.37	\$1.23	\$1.43	\$1.51	\$1.65	\$2.12	
A Royalty Quantity for Index Payors	7,672,862	6,075,256	6,668,215	6,674,765	6,472,832	6,972,465	6,660,728	6,381,213	6,380,834	6,549,951	7,199,403	8,697,761	82,406,285
Index-based Royalty Value	\$11,367,345	\$7,756,253	\$8,721,470	\$9,481,649	\$9,948,743	\$10,976,176	\$9,103,399	\$7,862,235	\$9,122,272	\$9,913,649	\$11,903,231	\$18,454,277	\$124,610,696.612
B Weighted Average Index Value													\$1.512
C Weighted Average Gross Proceeds Price for Index Payors													\$1.605
D Safety Net Median Value													\$1.520
Royalty Impact: A x (C - (.5(D-B)+B))													\$7,327,963
<u>ZONE 4</u>													
Net Average Index-based Price	\$1.49	\$1.29	\$1.34	\$1.44	\$1.56	\$1.60	\$1.40	\$1.26	\$1.47	\$1.54	\$1.68	\$2.14	
A Royalty Quantity for Index Payors	2,046,343	1,796,802	1,963,930	1,816,695	1,819,451	1,612,371	1,682,997	1,483,419	1,277,584	1,231,847	1,276,729	1,765,545	19,773,713
Index-based Royalty Value	\$3,050,586	\$2,319,222	\$2,628,720	\$2,619,674	\$2,843,802	\$2,577,778	\$2,355,475	\$1,873,982	\$1,872,756	\$1,897,220	\$2,138,703	\$3,786,590	\$29,964,508.138
B Weighted Average Index Value													\$1.515
C Weighted Average Gross Proceeds Price for Index Payors													\$1.873
D Safety Net Median Value													\$1.560
Royalty Impact: A x (C - (.5(D-B)+B))													\$6,630,414
<u>ZONE 5</u>													
Net Average Index-based Price	\$1.53	\$1.36	\$1.31	\$1.49	\$1.59	\$1.66	\$1.42	\$1.30	\$1.50	\$1.56	\$1.71	\$2.19	
A Royalty Quantity for Index Payors	1,241,720	1,146,471	1,179,104	1,381,188	1,547,613	1,570,853	1,566,488	1,553,822	1,535,309	1,551,359	1,544,695	1,499,003	17,317,625
Index-based Royalty Value	\$1,898,176	\$1,562,640	\$1,546,984	\$2,054,287	\$2,467,927	\$2,601,856	\$2,226,502	\$2,012,199	\$2,297,846	\$2,425,291	\$2,641,428	\$3,275,322	\$27,010,458.542
B Weighted Average Index Value													\$1.560
C Weighted Average Gross Proceeds Price for Index Payors													\$1.495
D Safety Net Median Value													\$1.380
Royalty Impact: A x (C - (.5(D-B)+B))													\$435,459

TOTAL \$19,742,639

1994 & 1995 - ROYALTY IMPACT OF COMPARING WYOMING INDEX PRICES TO INDEX PAYORS' GROSS PROCEEDS

	<u>Jan-94</u>	<u>Feb-94</u>	<u>Mar-94</u>	<u>Apr-94</u>	<u>May-94</u>	<u>Jun-94</u>	<u>Jul-94</u>	<u>Aug-94</u>	<u>Sep-94</u>	<u>Oct-94</u>	<u>Nov-94</u>	<u>Dec-94</u>	AVG. OR TOTAL
Net Average Index-based Price	\$1.74	\$1.64	\$1.75	\$1.44	\$1.43	\$1.20	\$1.29	\$1.28	\$1.21	\$1.05	\$1.33	\$1.45	
A Royalty Quantity for Index Payors	768,989	710,156	781,357	727,148	779,744	767,581	813,762	868,542	843,211	853,416	833,014	856,178	9,603,098
Index-based Royalty Value	\$1,339,323	\$1,162,999	\$1,369,719	\$1,044,912	\$1,115,554	\$920,330	\$1,051,652	\$1,115,208	\$1,023,658	\$899,216	\$1,107,909	\$1,244,312	\$13,394,790
B Weighted Average Index Value													\$1.39
C Weighted Average Gross Proceeds Price for Index Payors													\$1.41
D Safety Net Median Value													\$1.49
Royalty Impact: A x (C - (.5(D-B)+B))													(\$320,938)
	<u>Jan-95</u>	<u>Feb-95</u>	<u>Mar-95</u>	<u>Apr-95</u>	<u>May-95</u>	<u>Jun-95</u>	<u>Jul-95</u>	<u>Aug-95</u>	<u>Sep-95</u>	<u>Oct-95</u>	<u>Nov-95</u>	<u>Dec-95</u>	AVG. OR TOTAL
Net Average Index-based Price	\$1.21	\$0.91	\$0.91	\$0.90	\$0.91	\$0.97	\$0.80	\$0.67	\$0.78	\$0.85	\$1.09	\$1.14	
A Royalty Quantity for Index Payors	885,698	762,668	847,371	925,767	958,426	930,089	992,334	1,014,627	942,492	979,440	931,469	962,351	11,132,732
Index-based Royalty Value	\$1,069,923	\$695,299	\$766,871	\$832,573	\$874,723	\$905,597	\$794,529	\$683,520	\$734,830	\$834,809	\$1,014,991	\$1,099,967	\$10,307,632
B Weighted Average Index Value													\$0.93
C Weighted Average Gross Proceeds Price for Index Payors													\$1.02
D Safety Net Median Value													\$1.03
Royalty Impact: A x (C - (.5(D-B)+B))													\$412,550

1994 & 1995 - ROYALTY IMPACT OF COMPARING SAN JUAN INDEX PRICES TO INDEX PAYORS' GROSS PROCEEDS

	<u>Jan-94</u>	<u>Feb-94</u>	<u>Mar-94</u>	<u>Apr-94</u>	<u>May-94</u>	<u>Jun-94</u>	<u>Jul-94</u>	<u>Aug-94</u>	<u>Sep-94</u>	<u>Oct-94</u>	<u>Nov-94</u>	<u>Dec-94</u>	AVG. OR TOTAL
Net Average Index-based Price	\$1.60	\$1.46	\$1.62	\$1.35	\$1.34	\$1.10	\$1.21	\$1.19	\$1.08	\$0.73	\$1.03	\$1.18	
A Royalty Quantity for Index Payors	3,720,374	3,457,812	3,860,936	3,678,351	3,748,150	3,225,825	3,602,205	3,683,044	3,306,822	3,680,551	3,589,123	3,718,038	43,271,231
Index-based Royalty Value	\$5,933,997	\$5,058,779	\$6,262,438	\$4,958,417	\$5,033,765	\$3,551,633	\$4,362,270	\$4,397,555	\$3,561,447	\$2,697,844	\$3,682,440	\$4,383,567	\$53,884,153
B Weighted Average Index Value													\$1.25
C Weighted Average Gross Proceeds Price for Index Payors													\$1.28
D Safety Net Median Value													\$1.27
Royalty Impact: A x (C - (.5(D-B)+B))													\$881,325
	<u>Jan-95</u>	<u>Feb-95</u>	<u>Mar-95</u>	<u>Apr-95</u>	<u>May-95</u>	<u>Jun-95</u>	<u>Jul-95</u>	<u>Aug-95</u>	<u>Sep-95</u>	<u>Oct-95</u>	<u>Nov-95</u>	<u>Dec-95</u>	AVG. OR TOTAL
Net Average Index-based Price	\$0.98	\$0.67	\$0.65	\$0.66	\$0.70	\$0.75	\$0.64	\$0.55	\$0.67	\$0.76	\$0.85	\$0.92	
A Royalty Quantity for Index Payors	3,715,349	3,375,939	3,736,111	3,601,422	3,631,969	3,294,837	3,722,795	3,740,569	3,721,970	3,853,736	3,893,386	4,060,929	44,349,012
Index-based Royalty Value	\$3,648,473	\$2,258,503	\$2,435,944	\$2,380,540	\$2,553,274	\$2,474,423	\$2,382,589	\$2,038,610	\$2,497,442	\$2,924,986	\$3,293,805	\$3,715,750	\$32,604,338
B Weighted Average Index Value													\$0.74
C Weighted Average Gross Proceeds Price for Index Payors													\$0.89
D Safety Net Median Value													\$0.77
Royalty Impact: A x (C - (.5(D-B)+B))													\$5,961,035

Royalty Impact for GOM Zone 1 Under Option 3: Index + (Index Percentage Factor x Index)

	<u>Jan-94</u>	<u>Feb-94</u>	<u>Mar-94</u>	<u>Apr-94</u>	<u>May-94</u>	<u>Jun-94</u>	<u>Jul-94</u>	<u>Aug-94</u>	<u>Sep-94</u>	<u>Oct-94</u>	<u>Nov-94</u>	<u>Dec-94</u>	AVG. OR TOTAL
Average Index-based Price (Not Reduced for Transportation)	\$1.98	\$2.24	\$2.21	\$1.87	\$2.00	\$1.75	\$1.87	\$1.72	\$1.41	\$1.34	\$1.59	\$1.60	
Royalty Quantity for Index Payors	5,803,600	5,179,863	5,679,855	5,443,409	5,650,012	5,051,296	5,429,225	5,197,641	4,922,875	4,748,281	5,481,051	5,698,669	64,285,777
Index-based Royalty Value	\$11,514,342	\$11,613,253	\$12,575,199	\$10,179,175	\$11,300,024	\$8,819,563	\$10,141,792	\$8,939,943	\$6,916,639	\$6,362,697	\$8,692,947	\$9,140,665	\$116,196,239
A 1994 Weighted Average Index Value													\$1.81
B 1994 Weighted Average Gross Proceeds Price for Index Payors													\$1.750
	<u>Jan-95</u>	<u>Feb-95</u>	<u>Mar-95</u>	<u>Apr-95</u>	<u>May-95</u>	<u>Jun-95</u>	<u>Jul-95</u>	<u>Aug-95</u>	<u>Sep-95</u>	<u>Oct-95</u>	<u>Nov-95</u>	<u>Dec-95</u>	AVG. OR TOTAL
Average Index-based Price (Not Reduced for Transportation)	\$1.53	\$1.33	\$1.35	\$1.47	\$1.59	\$1.63	\$1.41	\$1.28	\$1.47	\$1.55	\$1.69	\$2.09	
C Royalty Quantity for Index Payors	4,991,949	4,344,857	4,728,950	4,436,852	4,403,201	4,370,245	3,933,963	4,036,333	4,204,550	4,306,513	4,285,023	4,370,110	52,412,546
Index-based Royalty Value	\$7,637,682	\$5,769,970	\$6,384,083	\$6,513,299	\$6,992,283	\$7,123,499	\$5,554,756	\$5,166,506	\$6,197,507	\$6,666,482	\$7,233,119	\$9,142,270	\$80,381,456
D 1995 Weighted Average Index Value													\$1.53
E 1995 Weighted Average Gross Proceeds Price for Index Payors													\$1.473
F Index Percentage Factor for 1995: (B-A)/A													-0.031809367
G Index + Index Percentage Factor x Index for 1995: (1+F)xD													\$1.485
1995 Royalty Impact: (E-G)xC													(\$620,892)

Royalty Impact for GOM Zone 2 Under Option 3: Index + (Index Percentage Factor x Index)

	<u>Jan-94</u>	<u>Feb-94</u>	<u>Mar-94</u>	<u>Apr-94</u>	<u>May-94</u>	<u>Jun-94</u>	<u>Jul-94</u>	<u>Aug-94</u>	<u>Sep-94</u>	<u>Oct-94</u>	<u>Nov-94</u>	<u>Dec-94</u>	AVG. OR TOTAL
Average Index-based Price (Not Reduced for Transportation)	\$2.01	\$2.29	\$2.28	\$1.92	\$2.01	\$1.76	\$1.88	\$1.73	\$1.42	\$1.36	\$1.63	\$1.62	
Royalty Quantity for Index Payors	5,958,657	5,448,819	6,420,122	6,109,209	6,485,154	5,987,646	5,962,429	6,406,316	5,406,040	5,450,768	5,366,611	5,489,841	70,491,612
Index-based Royalty Value	\$11,961,011	\$12,495,958	\$14,620,758	\$11,725,608	\$13,048,130	\$10,518,298	\$11,193,467	\$11,057,301	\$7,699,746	\$7,409,411	\$8,726,109	\$8,919,162	\$129,374,959
A 1994 Weighted Average Index Value													\$1.84
B 1994 Weighted Average Gross Proceeds Price for Index Payors													\$1.742
	<u>Jan-95</u>	<u>Feb-95</u>	<u>Mar-95</u>	<u>Apr-95</u>	<u>May-95</u>	<u>Jun-95</u>	<u>Jul-95</u>	<u>Aug-95</u>	<u>Sep-95</u>	<u>Oct-95</u>	<u>Nov-95</u>	<u>Dec-95</u>	AVG. OR TOTAL
Average Index-based Price (Not Reduced for Trans	\$1.56	\$1.36	\$1.38	\$1.49	\$1.61	\$1.66	\$1.44	\$1.31	\$1.51	\$1.58	\$1.73	\$2.17	
C Royalty Quantity for Index Payors	5,004,910	4,348,914	4,840,785	4,697,054	4,747,540	4,610,636	4,804,600	4,835,552	4,762,172	4,721,417	4,408,471	4,710,346	56,492,397
Index-based Royalty Value	\$7,787,640	\$5,902,098	\$6,702,874	\$7,015,386	\$7,623,193	\$7,630,603	\$6,904,897	\$6,320,757	\$7,170,470	\$7,476,701	\$7,607,761	\$10,211,357	\$88,353,736
D 1995 Weighted Average Index Value													\$1.56
E 1995 Weighted Average Gross Proceeds Price for Index Payors													\$1.465
F Index Percentage Factor for 1995: (B-A)/A													-0.050848872
G Index + Index Percentage Factor x Index for 1995: (1+F)xD													\$1.484
1995 Royalty Impact: (E-G)xC													(\$1,099,687)

Royalty Impact for GOM Zone 3 Under Option 3: Index + (Index Percentage Factor x Index)

	<u>Jan-94</u>	<u>Feb-94</u>	<u>Mar-94</u>	<u>Apr-94</u>	<u>May-94</u>	<u>Jun-94</u>	<u>Jul-94</u>	<u>Aug-94</u>	<u>Sep-94</u>	<u>Oct-94</u>	<u>Nov-94</u>	<u>Dec-94</u>	AVG. OR TOTAL
Average Index-based Price (Not Reduced for Transportation)	\$2.02	\$2.32	\$2.31	\$1.94	\$2.02	\$1.77	\$1.89	\$1.73	\$1.43	\$1.36	\$1.63	\$1.63	
Royalty Quantity for Index Payors	10,470,001	10,578,553	12,500,030	11,409,645	10,690,745	9,944,911	9,871,529	10,082,791	6,921,864	6,928,567	7,171,349	8,355,181	114,925,166
Index-based Royalty Value	\$21,188,665	\$24,542,243	\$28,916,736	\$22,082,417	\$21,613,898	\$17,594,205	\$18,644,850	\$17,489,441	\$9,913,313	\$9,451,720	\$11,717,361	\$13,591,094	\$216,745,943
A 1994 Weighted Average Index Value													\$1.89
B 1994 Weighted Average Gross Proceeds Price for Index Payors													\$1.876
	<u>Jan-95</u>	<u>Feb-95</u>	<u>Mar-95</u>	<u>Apr-95</u>	<u>May-95</u>	<u>Jun-95</u>	<u>Jul-95</u>	<u>Aug-95</u>	<u>Sep-95</u>	<u>Oct-95</u>	<u>Nov-95</u>	<u>Dec-95</u>	AVG. OR TOTAL
Average Index-based Price (Not Reduced for Transportation)	\$1.56	\$1.37	\$1.39	\$1.51	\$1.62	\$1.67	\$1.45	\$1.32	\$1.52	\$1.60	\$1.74	\$2.21	
C Royalty Quantity for Index Payors	7,672,862	6,075,256	6,668,215	6,674,765	6,472,832	6,972,465	6,660,728	6,381,213	6,380,834	6,549,951	7,199,403	8,697,761	82,406,285
Index-based Royalty Value	\$11,988,847	\$8,315,176	\$9,288,268	\$10,055,679	\$10,485,988	\$11,610,670	\$9,676,221	\$8,417,400	\$9,690,167	\$10,476,944	\$12,536,779	\$19,202,284	\$131,744,422
D 1995 Weighted Average Index Value													\$1.60
E 1995 Weighted Average Gross Proceeds Price for Index Payors													\$1.605
F Index Percentage Factor for 1995: (B-A)/A													-0.005288827
G Index + Index Percentage Factor x Index for 1995: (1+F)xD													\$1.590
1995 Royalty Impact: (E-G)xC													\$1,214,438

Royalty Impact for GOM Zone 4 Under Option 3: Index + (Index Percentage Factor x Index)

	<u>Jan-94</u>	<u>Feb-94</u>	<u>Mar-94</u>	<u>Apr-94</u>	<u>May-94</u>	<u>Jun-94</u>	<u>Jul-94</u>	<u>Aug-94</u>	<u>Sep-94</u>	<u>Oct-94</u>	<u>Nov-94</u>	<u>Dec-94</u>	AVG. OR TOTAL
Average Index-based Price (Not Reduced for Transportation)	\$2.05	\$2.34	\$2.32	\$1.94	\$2.01	\$1.79	\$1.90	\$1.76	\$1.45	\$1.38	\$1.66	\$1.65	
Royalty Quantity for Index Payors	3,121,723	3,235,767	3,348,437	2,744,875	3,108,294	2,700,124	2,527,093	2,953,800	2,067,823	1,745,860	2,346,285	2,286,615	32,186,696
Index-based Royalty Value	\$6,395,630	\$7,585,562	\$7,780,930	\$5,318,195	\$6,256,552	\$4,843,347	\$4,801,477	\$5,194,996	\$3,004,251	\$2,411,469	\$3,884,778	\$3,761,482	\$61,238,670
A 1994 Weighted Average Index Value													\$1.90
B 1994 Weighted Average Gross Proceeds Price for Index Payors													\$2.216
	<u>Jan-95</u>	<u>Feb-95</u>	<u>Mar-95</u>	<u>Apr-95</u>	<u>May-95</u>	<u>Jun-95</u>	<u>Jul-95</u>	<u>Aug-95</u>	<u>Sep-95</u>	<u>Oct-95</u>	<u>Nov-95</u>	<u>Dec-95</u>	AVG. OR TOTAL
Average Index-based Price (Not Reduced for Transportation)	\$1.57	\$1.38	\$1.41	\$1.52	\$1.64	\$1.68	\$1.48	\$1.34	\$1.54	\$1.62	\$1.77	\$2.24	
C Royalty Quantity for Index Payors	2,046,343	1,796,802	1,963,930	1,816,695	1,819,451	1,612,371	1,682,997	1,483,419	1,277,584	1,231,847	1,276,729	1,765,545	19,773,713
Index-based Royalty Value	\$3,220,432	\$2,477,341	\$2,774,051	\$2,761,376	\$2,983,900	\$2,706,768	\$2,488,431	\$1,994,139	\$1,971,130	\$1,992,073	\$2,256,163	\$3,947,254	\$31,573,057
D 1995 Weighted Average Index Value													\$1.60
E 1995 Weighted Average Gross Proceeds Price for Index Payors													\$1.873
F Index Percentage Factor for 1995: (B-A)/A													0.16471698
G Index + Index Percentage Factor x Index for 1995: (1+F)xD													\$1.860
1995 Royalty Impact: (E-G)xC													\$262,489

Royalty Impact for GOM Zone 5 Under Option 3: Index + (Index Percentage Factor x Index)

	<u>Jan-94</u>	<u>Feb-94</u>	<u>Mar-94</u>	<u>Apr-94</u>	<u>May-94</u>	<u>Jun-94</u>	<u>Jul-94</u>	<u>Aug-94</u>	<u>Sep-94</u>	<u>Oct-94</u>	<u>Nov-94</u>	<u>Dec-94</u>	AVG. OR TOTAL
Average Index-based Price (Not Reduced for Transportation)	\$2.11	\$2.41	\$2.40	\$1.99	\$2.09	\$1.87	\$1.98	\$1.83	\$1.50	\$1.45	\$1.72	\$1.71	
Royalty Quantity for Index Payors	1,214,971	1,147,681	1,161,617	1,317,608	1,311,793	816,485	1,255,101	1,182,362	1,144,992	1,110,532	1,186,353	1,224,402	14,073,897
Index-based Royalty Value	\$2,559,539	\$2,769,737	\$2,784,009	\$2,626,432	\$2,746,020	\$1,529,549	\$2,489,284	\$2,167,664	\$1,721,305	\$1,610,271	\$2,036,573	\$2,089,646	\$27,130,027
A 1994 Weighted Average Index Value													\$1.93
B 1994 Weighted Average Gross Proceeds Price for Index Payors													\$1.725
	<u>Jan-95</u>	<u>Feb-95</u>	<u>Mar-95</u>	<u>Apr-95</u>	<u>May-95</u>	<u>Jun-95</u>	<u>Jul-95</u>	<u>Aug-95</u>	<u>Sep-95</u>	<u>Oct-95</u>	<u>Nov-95</u>	<u>Dec-95</u>	AVG. OR TOTAL
Average Index-based Price (Not Reduced for Transportation)	\$1.63	\$1.46	\$1.46	\$1.57	\$1.68	\$1.73	\$1.50	\$1.38	\$1.58	\$1.64	\$1.80	\$2.27	
C Royalty Quantity for Index Payors	1,241,720	1,146,471	1,179,104	1,381,188	1,547,613	1,570,853	1,566,488	1,553,822	1,535,309	1,551,359	1,544,695	1,499,003	17,317,625
Index-based Royalty Value	\$2,019,865	\$1,673,848	\$1,721,492	\$2,173,069	\$2,594,831	\$2,722,812	\$2,354,954	\$2,144,274	\$2,420,671	\$2,549,400	\$2,780,451	\$3,402,737	\$28,558,402
D 1995 Weighted Average Index Value													\$1.65
E 1995 Weighted Average Gross Proceeds Price for Index Payors													\$1.495
F Index Percentage Factor for 1995: (B-A)/A													-0.105143823
G Index + Index Percentage Factor x Index for 1995: (1+F)xD													\$1.476
1995 Royalty Impact: (E-G)xC													\$334,187

Royalty Impact for the San Juan Basin Under Option 3: Index + (Index Percentage Factor x Index)

	<u>Jan-94</u>	<u>Feb-94</u>	<u>Mar-94</u>	<u>Apr-94</u>	<u>May-94</u>	<u>Jun-94</u>	<u>Jul-94</u>	<u>Aug-94</u>	<u>Sep-94</u>	<u>Oct-94</u>	<u>Nov-94</u>	<u>Dec-94</u>	AVG. OR TOTAL
Average Index-based Price (Not Reduced for Transportation)	\$1.92	\$1.80	\$1.97	\$1.68	\$1.68	\$1.43	\$1.53	\$1.51	\$1.40	\$1.19	\$1.47	\$1.62	
Royalty Quantity for Index Payors	3,720,374	3,457,812	3,860,936	3,678,351	3,748,150	3,225,825	3,602,205	3,683,044	3,306,822	3,680,551	3,589,123	3,718,038	43,271,231
Index-based Royalty Value	\$7,154,279	\$6,220,604	\$7,598,322	\$6,183,308	\$6,300,640	\$4,622,607	\$5,518,578	\$5,550,347	\$4,636,164	\$4,390,897	\$5,261,654	\$6,019,504	\$69,456,905
A 1994 Weighted Average Index Value													\$1.61
B 1994 Weighted Average Gross Proceeds Price for Index Payors													\$1.28
	<u>Jan-95</u>	<u>Feb-95</u>	<u>Mar-95</u>	<u>Apr-95</u>	<u>May-95</u>	<u>Jun-95</u>	<u>Jul-95</u>	<u>Aug-95</u>	<u>Sep-95</u>	<u>Oct-95</u>	<u>Nov-95</u>	<u>Dec-95</u>	AVG. OR TOTAL
Average Index-based Price (Not Reduced for Transportation)	\$1.42	\$1.09	\$1.07	\$1.07	\$1.13	\$1.16	\$1.02	\$0.95	\$1.10	\$1.16	\$1.25	\$1.33	
C Royalty Quantity for Index Payors	3,715,349	3,375,939	3,736,111	3,601,422	3,631,969	3,294,837	3,722,795	3,740,569	3,721,970	3,853,736	3,893,386	4,060,929	44,349,012
Index-based Royalty Value	\$5,268,365	\$3,666,270	\$3,990,167	\$3,860,724	\$4,096,861	\$3,808,832	\$3,804,696	\$3,553,541	\$4,079,279	\$4,474,187	\$4,878,413	\$5,409,157	\$50,890,492
D 1995 Weighted Average Index Value													\$1.15
E 1995 Weighted Average Gross Proceeds Price for Index Payors													\$0.89
F Index Percentage Factor for 1995: (B-A)/A													-0.203813748
G Index + Index Percentage Factor x Index for 1995: (1+F)xD													\$0.914
1995 Royalty Impact: (E-G)xC													(\$1,180,736)

Royalty Impact for Wyoming Under Option 3: Index + (Index Percentage Factor x Index)

	<u>Jan-94</u>	<u>Feb-94</u>	<u>Mar-94</u>	<u>Apr-94</u>	<u>May-94</u>	<u>Jun-94</u>	<u>Jul-94</u>	<u>Aug-94</u>	<u>Sep-94</u>	<u>Oct-94</u>	<u>Nov-94</u>	<u>Dec-94</u>	AVG. OR TOTAL
Average Index-based Price (Not Reduced for Transportation)	\$1.88	\$1.77	\$1.90	\$1.57	\$1.57	\$1.33	\$1.42	\$1.42	\$1.35	\$1.16	\$1.46	\$1.58	
Royalty Quantity for Index Payors	768,989	710,156	781,357	727,148	779,744	767,581	813,762	868,542	843,211	853,416	833,014	856,178	9,603,098
Index-based Royalty Value	\$1,443,136	\$1,254,609	\$1,480,672	\$1,137,987	\$1,225,498	\$1,020,883	\$1,158,255	\$1,228,987	\$1,134,119	\$991,385	\$1,212,035	\$1,355,615	\$14,643,179
A 1994 Weighted Average Index Value													\$1.52
B 1994 Weighted Average Gross Proceeds Price for Index Payors													\$1.41
	<u>Jan-95</u>	<u>Feb-95</u>	<u>Mar-95</u>	<u>Apr-95</u>	<u>May-95</u>	<u>Jun-95</u>	<u>Jul-95</u>	<u>Aug-95</u>	<u>Sep-95</u>	<u>Oct-95</u>	<u>Nov-95</u>	<u>Dec-95</u>	AVG. OR TOTAL
Average Index-based Price (Not Reduced for Transportation)	\$1.36	\$1.06	\$1.05	\$1.05	\$1.07	\$1.14	\$0.98	\$0.84	\$0.95	\$1.04	\$1.25	\$1.32	
C Royalty Quantity for Index Payors	885,698	762,668	847,371	925,767	958,426	930,089	992,334	1,014,627	942,492	979,440	931,469	962,351	11,132,732
Index-based Royalty Value	\$1,200,121	\$809,699	\$889,740	\$970,512	\$1,022,321	\$1,057,201	\$969,180	\$853,978	\$896,938	\$1,021,882	\$1,161,231	\$1,265,492	\$12,118,295
D 1995 Weighted Average Index Value													\$1.09
E 1995 Weighted Average Gross Proceeds Price for Index Payors													\$1.02
F Index Percentage Factor for 1995: (B-A)/A													-0.075968076
G Index + Index Percentage Factor x Index for 1995: (1+F)xD													\$1.006
1995 Royalty Impact: (E-G)xC													\$102,032