

Final Finding and Determination  
To Sell Royalty Oil  
in a  
Competitive Sale



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**August 7, 2000**

## **I. INTRODUCTION AND BACKGROUND**

On September 7, 2000, the state of Alaska through the Department of Natural Resources will hold a competitive sale of the state's royalty oil for a term of one-year. Upon legislative approval under AS 38.06.055 and written agreement of the state and the buyer, this agreement may be reissued as a two-year agreement that will expire on December 31, 2003.

### **A. Notice**

Under AS 38.06.183, the commissioner is required to issue a finding that the sale is in the state's best interests and provide opportunity for public comment. On June 23, 2000, the department issued a "Preliminary Finding and Determination to Sell Royalty Oil in a Competitive Sale." The department notified the public about the preliminary finding and draft contract, and written comments were solicited by sending a notice of the sale or copies of these documents to the public, industry, government representatives, and the media. In addition, the department published notice in newspapers throughout Alaska. The 30-day comment period ended July 24. Three comments were received and are included along with the department's responses in Appendix A. In addition, a public hearing before the Alaska Royalty Oil and Gas Development Advisory Board (Royalty Board) was held July 14, 2000 after public notice was given of the Board meeting and hearing. No one was present at the hearing to give testimony.

The department analyzed public comments, and comments and recommendations by the Royalty Board. The commissioner has determined that the contract is in the state's best interests. Bids are scheduled to be opened September 7, 2000 and the contract is tentatively scheduled to be executed September 29, 2000. Potential bidders should consult the "Invitation to Bid" for specifics on qualifications and bidding procedures. Copies of the "Invitation to Bid" may be obtained by contacting Kevin Banks at the Division of Oil and Gas (907) 269-8781.

The Royalty Board will be discussing the sale and contract, and potential recommendations to the legislature at a meeting scheduled for September 11, 2000 at 8:30 a.m. at the Legislative Information Office, 716 W. 4<sup>th</sup> Avenue, Room 220 in Anchorage, Alaska. The public is invited to attend.

### **B. Background**

The state of Alaska owns the oil and gas on its own land and some of the oil and gas royalty under federal lands, native lands, and private parcels. The state receives a royalty of approximately 12.5 percent of the oil and gas produced from this interest and may take its share of oil production either "in-kind" (RIK) or "in-value" (RIV). When oil is taken RIV, the state's lessees, who produce the oil, market the state's share along with their own share of production. The lessees are obligated to pay the state the value of the state's RIV share. When the state takes its royalty share of the oil RIK, it assumes ownership of the oil, and the commissioner disposes of the oil through either competitive or non-competitive sales.

The RIK proposed in this best interest finding is for a competitive sale. State regulations require that the commissioner of the Department of Natural Resources establish the terms, conditions, and method of disposition; and issue a finding that taking RIK is in the best interests of the state and that the disposition is in the best interests of the state. This RIK is proposed to relieve market conditions. 11 AAC 03.024. If a contract is for one year or less and is entered into to relieve market conditions, legislative approval is not required. However, it is currently anticipated that the proposed contract will be reissued after one-year. Therefore, the royalty board has been notified of the proposed disposition and a recommendation will be obtained from the board to take to the legislature in compliance with AS 38.06.050.

This final finding begins by outlining the important terms of the proposed contract. A discussion of the proposed contract terms is followed by an analysis of the reasonably foreseeable economic and social impacts. Finally, a conclusion is given as to whether this RIK is in the state's best interests.

## **II. DISCUSSION OF CONTRACT TERMS**

The RIK contract offered in this solicitation defines the terms Royalty Oil and Sale oil. The definition of Royalty Oil is “the total volume of crude petroleum oil and other hydrocarbons, including such substances as crude oil, condensate, natural gas liquids (NGLs), or return oil from crude oil topping plants, that may be blended with crude oil before the Point of Delivery and tendered as a common stream to the State.” In other words, Royalty Oil is the state's share of the total volume of crude oil and other liquids that the lessee produces from the lease or unit. Sale oil means “the oil that the State has agreed to sell and the Buyer has agreed to buy” under the RIK contract.

### **A. Point of Delivery**

The RIK contract defines the Point of Delivery as “the transfer point where the State receives Royalty Oil in-kind from the Lessees.” The total volume of crude oil and other liquids that are blended with it is measured at the Lease Automated Custody Transfer (LACT) meter as it leaves the unit and it is at this point that the Royalty Oil is tendered to the state. The Point of Delivery for Royalty Oil produced at the Kuparuk River Unit (KRU) is the LACT meter at the intake of the Kuparuk Pipeline. The Point of Delivery for the Milne Point Unit (MPU) Royalty Oil is the LACT meter at the intake of the Milne Point Pipeline and the Point of Delivery for Duck Island Unit (DIU) Royalty Oil is the LACT meter at the intake of the Endicott Pipeline.

### **B. Quantity**

The division's forecast of available Royalty Oil production appears in Table II-1. From 2000–03 Royalty Oil production will hover around 135,000 barrels per day. For this short period the production decline in the Prudhoe Bay Unit will be offset by new production from the Colville River Unit and the North Star Unit.

Only a part of the total 135,000 barrels per day will be available for sale under the RIK contract. Table II-1 lists adjustments to this volume.

- In its forecast, DNR estimates that 30,000 barrels per day of NGLs from the PBU will be sent to the KRU. As these NGLs are later produced from the KRU, the KRU lessees are entitled to a credit against future royalty payable to the state. The credit is based on the value of the NGLs produced at the PBU but the lessee's may deduct up to ten percent of the gross KRU production in the determination of their royalty obligation.
- The state will keep ten percent of the Royalty Oil production from the DIU and KRU in-value as credit towards field cost deductions paid to the lessees for Royalty Oil whether taken by the state in-value or in-kind.
- In two contracts with Williams the state has committed about 60,000 barrels per day of royalty-in-kind for use in Williams' North Pole refinery.

Only 60,000 barrels per day of Royalty Oil remains that the state may take in-kind and offer for sale. Of this 60,000 barrels per day, 18,000 barrels will come from fields that have not yet begun production. The state will offer approximately 35,000 barrels per day of sale oil from DIU, KRU, and MPU. The remaining Royalty Oil volume will remain "in-value."

The leases, unit agreements, and Royalty Settlement Agreements (RSAs) with the producers govern the procedures that the state must follow when taking its royalty-in-kind. These agreements require that the state nominate sale oil proportionately from all of the producers in each unit ninety days in advance of the production month. In order to comply with these requirements, the RIK contract that will result from this solicitation will require the purchaser to buy a quantity of sale oil determined as a percent of the total monthly production of Royalty Oil as measured at the Point of Delivery. The RIK contract specifies that a quantity of sale oil will be calculated as a percent of monthly Royalty Oil production from the DIU, the KRU, and the MPU.

The top half of Table II-2 will appear in Article 2.3 of the RIK contract and shows the percentage of Royalty Oil produced from each unit and tendered at each Point of Delivery. The percent of Royalty Oil varies each year to accommodate the expected decline of Royalty Oil production during the contract term. In this way, purchasers can expect a somewhat consistent supply of sale oil through the RIK contract term. Table II-2 also includes a forecast of sale oil volume for reference.

**Table II-1: Royalty Oil Production Forecast**

NORTH SLOPE										Royalty-in-Kind			
Badami Unit	Colville River Unit	Duck Island Unit	Kuparuk River Unit (After Deducting for Outside Substances)	Milne Point Unit	North Star Unit	Prudhoe Bay Unit	Total North Slope	PBU Royalty NGLs Delivered to KRU via the Oliktok Pipeline <sup>1</sup>	Field Cost Credit <sup>3</sup>	Available Royalty Volume for Sale as Royalty-in-Kind	Williams No. 1	Williams No. 3	RIK Volumes (Net of Williams')

Royalty:	14.6%	10.0%	14.3%	11.25%	14.6%	16.0%	12.6%	12.4%						
2000	447	4,000	5,771	27,114	7,886	0	87,544	132,761	3,750	12,043	116,969	35,000	24,950	57,019
2001	438	8,000	5,589	25,415	8,229	1,600	82,123	131,393	3,750	11,313	116,331	35,000	24,637	56,694
2002	438	8,000	5,386	25,634	8,669	10,400	77,680	136,207	3,750	10,870	121,587	35,000	24,858	61,729
2003	438	8,000	5,192	25,829	8,574	10,400	74,664	133,096	3,750	10,568	118,778	35,000	25,013	58,765

Source: ADNRR

<sup>1</sup>Approximately 30,000 bpd NGLs are shipped to the KRU for the Large Scale Enhanced Oil Recovery (LSEOR) project. The royalty on these deliveries are not available for sale as Sale Oil.

<sup>2</sup>KRU lessees receive a credit equivalent to approximately 10% of the royalty volume for imported NGLs via the Oliktok Pipeline.

<sup>3</sup>Five percent of the Royalty Oil volume from the DIU, KRU, and PBU are reserved to cover field cost deductions on the Sale Oil volumes.

**Table II-2: Calculation of Sale Oil Quantity**

<b>Percent of Royalty Oil by Unit</b>			
	<b>DIU</b>	<b>KRU</b>	<b>MPU</b>
2000	84.00%	84.00%	95.00%
2001	87.00%	88.00%	95.00%
2002	87.00%	87.00%	95.00%
2003	88.00%	87.00%	95.00%

<b>Forecast Sale Oil by Unit (bpd)</b>				
	<b>DIU</b>	<b>KRU</b>	<b>MPU</b>	<b>TOTAL Sale Oil</b>
2000	4,847	22,776	7,491	35,115
2001	4,862	22,365	7,817	35,044
2002	4,685	22,302	8,236	35,223
2003	4,569	22,471	8,145	35,185

Every month the state gives a ninety-day notice prior to the production month that it intends to nominate sale oil. The nomination schedule in Article 2.3 of the RIK contract will serve as the basis for these nomination notices.

If the state must reduce its sale oil nomination, either through the Buyer’s default or termination of the RIK contract, the lessees will be required to take more Royalty Oil in-value. In this situation the lessees may invoke a force majeure clause in their RSA’s with the state. This clause provides that the lessees can require a six-month nomination notice period rather than the 90-day nomination notice period before taking additional volumes of Royalty Oil. This force majeure clause is triggered if the lessees are unable to secure sufficient marine transportation to ship the additional Royalty Oil from Valdez. If this circumstance arises, the Buyer must provide the state with sufficient notice to prematurely terminate the contract. If force majeure is declared by one of the lessees, the notice required to terminate the contract will extend for an additional 90-days. The exposure that the state will face and the obligations of the buyer in the event of a default is explained in the description of the RIK contract’s security provision.

**C. Price**

BACKGROUND: Alaska regulations require that the commissioner may dispose of royalty oil to “relieve market conditions.” This phrase is defined in 11AAC 03.024 as the situation when “in a disposition of royalty oil by competitive bid...there is substantial probability that the state will receive, as a result of the disposition by competitive bid, more than the volume-weighted average of the current reported netback prices filed by the lessees for royalty purposes.” Put more simply, the price of RIK has to exceed the price of RIV most of the time. The state could exercise two options to achieve this goal. The state could set the RIK price equal to the price paid by the lessees plus some premium. Alternatively, the state could set a price based on a set price term similar to the price terms found in private crude oil contracts. The state has to set a price such that “there is substantial probability” that the RIK price is higher than the RIV price.

The RIV price is a netback price, that is, it is calculated starting with a price of Alaska North Slope crude oil at the market destination minus deductions for marine transportation and pipeline tariffs. The netback price also includes an adjustment for quality as different streams of oil from different units on the North Slope are commingled.

The state has used both price terms in the past but it most often has relied on the use of the volume-weighted average RIV price paid by all of the lessees in the unit from where the RIK is sold. There have been only three exceptions to the rule that RIK purchasers must pay the state the amount that the state would have received if it had kept its royalty oil in-value.

- On December 11, 1984 the state conducted a competitive royalty oil sale and sold about 90,000 barrels per day from the Prudhoe Bay Unit and Kuparuk River Unit. Bidders were invited to offer a premium above a base price of \$17.92 per barrel for Prudhoe Bay Unit royalty oil and \$16.92 per barrel for Kuparuk River royalty oil. The base price was subject to change during the term of the contracts (six-months to one-year) in proportion to changes in the average of the three highest postings for West Texas Sour (WTS) crude oil. Each contract specified, however, that the purchase price would in no event be less than the lessees' reported netback prices. The contract did not specify an "Amerada Hess" adjustment, i.e., a retroactive adjustment in the price reflecting the outcome of the ANS royalty litigation (*Amerada Hess, et al. v. Alaska*, 1JU-77-847 Civil. Later captioned as the ANS Royalty Litigation).
- The state issued another solicitation offering 15,000 barrels per day of Kuparuk River Unit royalty oil on April 18, 1985. The price terms were similar to the earlier solicitation and bidders offered premiums to a \$15.83 per barrel base price ranging from \$.64 to \$.85 per barrel. The price was not subject to Amerada Hess adjustments. The terms of these contracts were six months beginning when the deliveries under the December 1984 competitive sale contract terms expired.

An evaluation of these two sales in late 1985 led the state to abandon the use of a base price that was not specifically tied to the volume-weighted average RIV price. The state's decision relied on the concerns about the outcome of the ANS Royalty Litigation, i.e., if the outcome of the ANS Royalty Litigation leads to RIV prices in excess of the RIK price, the state would suffer lost revenues. Whether or not the state ever lost revenues on these contracts is indeterminate. The state subsequently settled with RIK purchasers over the Amerada Hess claims, but these settlements cannot be applied to the competitive sales in 1984 and 1985. The state received no bids in the competitive sale held in December 1985 when the state offered a contract with the normal RIK-based-on-RIV price term and provisions to re-coup Amerada Hess adjustments.

- In 1995 the state negotiated a three-year contract with Tesoro Alaska Petroleum Company for 30.0 percent of the royalty oil produced from the Prudhoe Bay Unit. Although the ANS Royalty Litigation had long been settled by 1995, the reliance on the RIV price meant that RIK purchasers were still exposed to other adjustments. The RSA with BP Exploration (Alaska) Inc. ("BP"), for example, provides for a six-month true-up of the marine transportation cost deduction used in the calculation of BP's royalty value. BP's marine

transportation cost deduction is also subject to audit. The price term of Tesoro’s 1995 contract was based on the royalty formula that appears in the RSA between the state and Exxon. The state provided price certainty to Tesoro by choosing a formula-based price subject to only routine and relatively immediate changes to the quality bank adjustment. The state, in return, negotiated a price that was historically higher than the volume-weighted average RIV price.

**PRICE IN THE PROPOSED CONTRACT:** The state will offer a price in this present solicitation that will provide the buyer with price certainty and avoid the exposure of the buyer to long-outstanding subsequent adjustments to the price.

Article II of the proposed RIK contract specifies the price of sale oil. The price of sale oil delivered by the state to the buyer each production month (t) is the Royalty Value plus a fixed premium. The premium is a per-barrel amount and is the bid variable of the competitive sale, i.e., the premium specified in the RIK contract will be the winning bid. A single premium will apply to all sale oil no matter from which unit the sale oil is produced. The Royalty Value will be different for each unit to account for different pipeline tariffs upstream of Pump Station No. 1, the different quality of the crude oil produced from each unit, and the different working interest ownership in each unit. The price of sale oil is:

$$\text{Price}_{u,t} = \text{Royalty Value}_{u,t} + \text{Premium} \quad (1)$$

where the Premium is the winning bid for the sale oil,  
 u = the unit where the sale oil is produced, and  
 t = production month.

$$\text{Royalty Value}_{u,t} = \text{VV}_{u,t} - \text{TA}_{u,t} + \text{CQBA}_{u,t} \quad (2)$$

where  $\text{VV}_{u,t}$  = the Valdez Value for the unit where the sale oil is produced,  
 $\text{TA}_{u,t}$  = a Tariff Allowance deducted from the Valdez Value in month t to calculate a “netback” value of the sale oil at the Point of Delivery, and  
 $\text{CQBA}_{u,t}$  = the Computed Quality Bank Allowance for the unit.

#### Valdez Value

The Valdez Value in this equation emulates the RIV price for each unit after subtracting from the West Coast Destination Value a deduction for marine transportation cost. The Valdez Values for RIV differ for each unit because the working interest ownership in each unit is different and each lessee calculates its royalty obligation differently. The West Coast Destination Value and the deduction for marine transportation costs are variously defined in the Royalty Settlement Agreements (RSAs) with the lessees but the marine transportation cost component defined in some of the RSAs is subject to retroactive adjustments.

From the RSAs and the royalty filings from the lessees the state will calculate  $\text{VV}_{u,t}$ . The state will define the  $\text{VV}_{u,t}$  such that no retroactive adjustment to  $\text{Price}_{u,t}$  will be necessary beyond those adjustments that affect the purchaser and the state equally (see the discussion of Tariffs



Allowance and the Quality Bank below).  $VV_{u,t}$  will be set by formula and the RSA marine transportation cost deduction will be implicit in its calculation.  $VV_{u,t}$  is set out in the following equation:

$$VV_{u,t} = WTI_t - 12\text{-Month RIV Spread}_u \quad (3)$$

That is, Valdez Value ( $VV_{u,t}$ ) for each unit (u) will be calculated as the difference between  $WTI_t$  (West Texas Intermediate) for the production month (t) and the 12-Month RIV Spread calculated from the difference of WTI and the RIV Valdez Value for each unit over a 12-month period.

$WTI_t$  is the spot price for prompt month deliveries at Cushing, Oklahoma reported during the month t in Platt's Oilgram News. The state will compute the daily average WTI from the high and low WTI price reported by Platt's for each trading day in the production month and from these averages calculate the monthly WTI average price for the production month.

The state will determine the 12-Month RIV Spread<sub>u</sub> as the difference of WTI and the RIV Valdez Value based on 12 months of royalty reports filed by the lessees in each unit. The state will subtract the monthly RIV Valdez Value for each unit from the monthly WTI price and then compute the 12-Month RIV Spread<sub>u</sub> for each unit. The state will use the 12-Month RIV Spread<sub>u</sub> that will yield a Royalty Value over the historical 12-month period that is higher than the Royalty Value for RIV 75 percent of the time in order to comply with 11AAC 03.024.

The state will apply the 12-Month RIV Spread<sub>u</sub> to the calculation of  $VV_{u,t}$  for six-months then the state will calculate a new  $VV_{u,t}$ . These 12-month differences will be determined in March and September each year. For example, the state will compute in September 2000 the 12-Month RIV Spread<sub>u</sub> based on RIV data for July 1999 to June 2000 and apply it to RIK deliveries in the production months of January to March 2001.<sup>1</sup> In March 2001 the State will compute a new 12-Month RIV Spread<sub>u</sub>, based on the RIV data for January to December 2000 and apply it to deliveries in the production months of April 2001 to September 2001.

As the 12-Month RIV Spread<sub>u</sub> changes every six months, it will capture changes in the difference between WTI and the market price of ANS over time and changes to the marine transportation deductions allowed under the RSAs. Once the state determines the 12-Month Average RIV Spread<sub>u</sub> it will not be subject to any retroactive adjustment.

#### Tariff Allowance

The Tariff Allowance (TA) is a per-barrel value and is calculated as the simple average of the three lowest TAPS tariffs filed with the Federal Energy Regulatory Commission (FERC) for shipments of oil from Pump Station No.1 to the terminal at Valdez, Alaska. The three lowest tariffs used in the TA will include any incentive tariffs that may be offered by the pipeline carriers. Where applicable the tariffs for pipelines upstream of Pump Station No.1 are added to the simple average of the three lowest TAPS tariffs to calculate the sale oil price at the DIU,

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<sup>1</sup> The state will assume that the ownership proportions may result from the re-alignments among BP, ExxonMobil, and Phillips Alaska will apply.

KRU, and MPU. Table II-3 illustrates how the state will calculate the TA for each of the four units from which sale oil will be offered.

<b>Table II-3: Hypothetical Tariff Allowance (TA)</b>	
<b>Calculation of Tariff Allowance for the Trans-Alaska Pipeline 2001</b>	
Trans-Alaska Pipeline System (TAPS) Owner	FERC Approved Tariff Pump Station No. 1 to Valdez
Amerada Hess Pipeline	\$2.47 *
ARCO Pipeline	\$2.48 *
Exxon Pipeline	\$2.70
Mobil Pipeline	\$2.63
Phillips Pipeline	\$2.46 *
BP	\$2.80
Union Pipeline	\$2.50
Simple Average of the *Lowest Three Tariffs =	\$2.47000
<b>TA<sub>TAPS</sub> =</b>	<b>\$2.47 <sup>1</sup></b>
<b>Calculation of TA for Duck Island Unit <u>2</u>/</b>	
TA <sub>TAPS</sub> =	\$2.47
Endicott Pipeline Co. Tariff	\$0.490000
<b>TA<sub>U=DIU</sub></b>	<b>\$2.96 <sup>1</sup></b>
<b>Calculation of TA for Kuparuk River Unit</b>	
TA <sub>TAPS</sub> =	\$2.47
Kuparuk Pipeline Co. Tariff	\$0.210000
<b>TA<sub>U=KRU</sub></b>	<b>\$2.68 <sup>1</sup></b>
<b>Calculation of TA for Milne Point Unit <u>2</u>/</b>	
TA <sub>TAPS</sub> =	\$2.47
Kuparuk Transportation Co. Tariff	\$0.150000 <sup>2</sup>
Milne Point Pipeline Co. Tariff	\$0.530000
<b>TA<sub>U=MPU</sub></b>	<b>\$3.15 <sup>1</sup></b>

<sup>1</sup>Values for each TA is rounded to the nearest cent before it is included in subsequent calculations.

<sup>2</sup>Kuparuk Pipeline/Milne Point Pipeline connection to TAPS Pump Station No. 1.

The TA is subject to retroactive adjustments at anytime after delivery of the sale oil if the tariffs charged to the shipper by the carriers should change as the result of litigation or dispute. The reason for this is that the state and the Buyer should be indifferent to refunds or increases in the tariff. For example, if the tariff on the Kuparuk Pipeline should be retroactively increased by \$.10 per barrel, the state will be obligated to refund \$.10 per barrel to the buyer. Alternatively, if the tariff should retroactively decrease, the buyer will receive a refund from the pipeline carrier and pass the refund on to the state.

#### Computed Quality Bank Adjustment (CQBA)

TAPS and the North Slope oil pipelines upstream of Pump Station No. 1 use a mechanism to address the change in value of any particular stream when it is mixed with other streams. When a high-value crude oil stream is blended with a lower-value crude oil stream, the shippers of the lower-valued crude stream must compensate the shippers of the high-value crude oil stream. This mechanism is called the TAPS Quality Bank and is administered under orders of the

Federal Energy Regulatory Commission (FERC) and the Regulatory Commission of Alaska (RCA, formerly the Alaska Public Utilities Commission). Any buyer of sale oil under this RIK solicitation who will ship the sale oil on TAPS or the other North Slope pipelines must participate in the TAPS Quality Bank.<sup>2</sup>

To calculate the price of sale oil at the Point of Delivery an adjustment must be made for the impact that the sale oil will have on the value of the commingled crude oil stream at the TAPS Valdez terminal.

The CQBA is a per-barrel value, either positive or negative, and will be calculated each month by the state for sale oil from each unit. The source data used by the Quality Bank administrator is confidential under federal law and the state cannot reveal this information to the buyer. Furthermore, the exact Quality Bank Adjustment (QBA) for the production month will not be known at the time that the state issues the “Production Month Invoice” after the end of the production month. Typically, the state receives the data to calculate the actual QBA for the production month two months later. In its calculation of CQBA, the state will preserve the confidentiality of the Quality Bank source data by taking an average of the actual QBA over the three months previous to the production month. This averaging will also tend to smooth out any discrepancies between the actual QBA and the CQBA and so the CQBA will not require a routine true-up.<sup>3</sup>

<b>Table II-4: Hypothetical Quality Bank Adjustment</b>				
<b>TAPS Quality Bank Stream Values and Total Stream Volume Shipped June 2001</b>				
Sample Location	Stream	Volume (BBL)	Stream Value (\$/BBL)	Total Stream Value (\$)
PBU IPA	PBU IPA	19,000,000	\$27.9380000000	\$530,822,000.00
LISBURNE	LISBURNE	3,500,000	\$27.5372400000	\$96,380,340.00
ENDICOTT	ENDICOTT	1,250,000	\$27.2598000000	\$34,074,750.00
KUPARUK	KUPARUK	9,000,000	\$27.3224400000	\$245,901,960.00
PS #1	PS #1 REFERENCE	32,750,000	<b>\$27.7001236641</b>	\$907,179,050.00
GVEA OFFTAKE	GVEA PASSING	27,000,000	\$27.6546500000	\$746,675,550.00
GVEA RETURN	GVEA RETURN	3,500,000	\$26.6753800000	\$93,363,830.00
GVEA	GVEA REFERENCE	30,500,000	<b>\$27.5422747541</b>	\$840,039,380.00
PSVR OFFTAKE	PSVR PASSING	30,000,000	\$27.5517600000	\$826,552,800.00
PSVR RETURN	PSVR RETURN	1,000,000	\$26.8450200000	\$26,845,020.00
PSVR	PSVR REFERENCE	31,000,000	<b>\$27.5289619355</b>	\$853,397,820.00
<b>Table II-4: Hypothetical Quality Bank Adjustment (Cont'd)</b>				

<sup>2</sup> Mitchell & Mitchell, 8300 Douglas Avenue, #800, Dallas, TX 75225, administer the TAPS Quality Bank. Anyone who ships oil on TAPS must make prior arrangements with Mitchell & Mitchell to participate in the TAPS Quality Bank.

<sup>3</sup> Should the Quality Bank Adjustments be subject to retroactive adjustments because of FERC or RCA ruling, the state will recalculate the CQBA using the retroactive QBA's and the methodology described here.

EPC Quality Bank				
Stream Values and Total Stream Volume Shipped				
June 2001				
Sample Location	Stream	Volume (BBL)	Stream Value (\$/BBL)	Total Stream Value (\$)
BADAMI	BADAMI	80,000	\$27.4526400000	\$2,196,211.20
ENDICOTT REFERENCE	ENDICOTT REFERENCE	1,250,000	\$27.2598000000	\$34,074,750.00
ENDICOTT MAIN PROD	ENDICOTT MAIN PROD <sup>1</sup>	1,170,000	<b>\$27.2466143590</b>	\$31,878,538.80

KTC Quality Bank				
Stream Values and Total Stream Volume Shipped				
June 2001				
Sample Location	Stream	Volume (BBL)	Stream Value (\$/BBL)	Total Stream Value (\$)
MILNE POINT	MILNE POINT	1,500,000	\$27.1352300000	\$40,702,845.00
KUPARUK REFERENCE	KUPARUK REFERENCE	9,000,000	\$27.3224400000	\$245,901,960.00
KUPARUK RIVER UNIT	KUPARUK RIVER UNIT <sup>1</sup>	7,500,000	<b>\$27.3598820000</b>	\$205,199,115.00

Tables II-4 and II-5 illustrate how the state will calculate the quality bank differential for sale oil produced from each unit. The TAPS Quality Bank Administrator provides to the state, pipeline owners, and shippers the information in Table II-4. If the buyer is a shipper on TAPS, he will also receive this information. In the column titled “Stream Value (\$/BBL)” are the different per-barrel values of each stream produced from the units from which sale oil will be delivered. The “PSVR Reference Stream Value” is the stream value of the oil downstream of the Petro Star Valdez refinery. Because the calculation of Royalty Value begins with a Valdez Value, the appropriate quality adjustment is calculated as the difference between the stream value of the unit (field) and the PSVR Reference Stream Value. These are the QBA’s in Table II-5.

Assume that the production month is March 2001 and the sale oil is produced from the Duck Island Unit. The state sends an invoice to the buyer on April 4, 2001. By this date the state will have received the “Stream Values and Total Stream Volume Shipped” for each pipeline as illustrated in Table II-4 for January 2001. The state will calculate the per-barrel difference between the Stream Value for each unit where the buyer is taking sale oil and the PSVR Reference Stream Value. This is identified as  $QBA_{u=DIU @ Valdez}$  in Table II-5 and equals  $-\$0.2823475765$  per barrel. The state will also calculate the  $QBA_{u=DIU @ Valdez}$  for November 2000 and December 2000. The simple average of these three QBA’s is the CQBA. The CQBA is the only number that the state will provide to the buyer. The state will calculate of CQBA for the April 2001 production month as the average of the QBA’s for December, January, and February 2001. Although the CQBA is calculated from data collected several months prior to the production month, any differences between the CQBA and the actual adjustment for the production month should smooth out over time.

<p><b>Table II-5: Hypothetical Quality Bank Adjustment</b></p> <p style="text-align: center;"><b>Calculation of Quality Bank Adjustment for Sale Oil January 2001</b></p>
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Quality Bank Adjustment for the Duck Island Unit = the Stream Value for Endicott Main Production minus the Stream Value of PSVR Reference

$$QBA_{u=DIU @ Valdez} = 27.246614359 - 27.5289619355$$

$$QBA_{u=DIU @ Valdez} = -\$0.2823475765$$

Quality Bank Adjustment for the Kuparuk River Unit = the Stream Value for Kuparuk River Unit minus the Stream Value of PSVR Reference

$$QBA_{u=KRU @ Valdez} = 27.359882 - 27.5289619355$$

$$QBA_{u=KRU @ Valdez} = -\$0.1690799355$$

Quality Bank Adjustment for the Milne Point Unit = the Stream Value for Milne Point minus the Stream Value of the PSVR Reference

$$QBA_{u=MPU @ Valdez} = 27.1352300000 - 27.5289619355$$

$$QBA_{u=MPU @ Valdez} = -\$0.3937319355$$

As in the case for the Tariff Adjustment, CQBA may be retroactively changed if there is a retroactive change in the Quality Bank as a result of litigation or dispute. The state and the Buyer should be indifferent to the possibility that refunds or charges should be passed through to one another after the sale oil is delivered.

**ROYALTY VALUE AND THE VALUE OF RIV:** The state examined the behavior of prices over the last several years and concluded that it is possible to set a Valdez Value so that  $Price_{u,t}$  will meet the “substantial probability” test in 11 AAC 03.024. Table II-6 illustrates the calculation of the WTI Method if it applied to RIK sales over the two year period between April 1998 and March 2000. In “Summary Statistics” in Table II-6 the resulting Royalty Value $_{u,t}$  yields an average price for RIK oil sold from the Prudhoe Bay Unit that is \$0.60 per barrel more than the state received for its RIV oil (\$13.05-\$12.45). In four months out of the 24 months in this period the Royalty Value $_{u,t}$  would have been less than the RIV price.

**Table II-6: "Valdez Value Method" RIK Price versus RIV Prudhoe Bay Unit**

	WTI <sub>t</sub>	12-Month RIV Spread <sub>t</sub> (WTI-Valdez Value Rolling Q75 Spread)	TA <sub>u,t</sub>	CQBA <sub>u,t</sub> (3-Month Moving Average)	Royalty Value <sub>u,t</sub>	Actual PBU RIV Netback Price
Apr-98	15.31	3.12	2.71	0.23	9.71	8.37
May-98	14.93	3.12	2.71	0.16	9.26	8.19
Jun-98	13.69	3.12	2.71	0.17	8.03	7.56
Jul-98	14.12	3.12	2.71	0.14	8.43	8.24
Aug-98	13.39	3.12	2.71	0.21	7.77	8.00
Sep-98	14.98	3.12	2.71	0.23	9.38	9.45
Oct-98	14.42	3.28	2.71	0.24	8.66	9.12
Nov-98	12.95	3.28	2.71	0.24	7.20	7.61
Dec-98	11.29	3.28	2.71	0.26	5.55	5.48
Jan-99	12.48	3.28	2.48	0.29	7.01	6.63
Feb-99	12.00	3.28	2.49	0.28	6.51	6.31
Mar-99	14.66	3.28	2.49	0.24	9.13	8.52
Apr-99	17.34	3.12	2.49	0.24	11.97	11.03
May-99	17.74	3.12	2.49	0.23	12.35	11.56
Jun-99	17.90	3.12	2.46	0.27	12.59	11.51
Jul-99	20.08	3.12	2.30	0.35	15.02	14.19
Aug-99	21.27	3.12	2.38	0.41	16.18	15.46
Sep-99	23.88	3.12	2.30	0.40	18.85	18.20
Oct-99	22.67	3.07	2.30	0.30	17.60	17.50
Nov-99	24.89	3.07	2.11	0.28	19.99	19.11
Dec-99	26.08	3.07	2.11	0.32	21.22	20.10
Jan-00	27.24	3.07	2.59	0.41	22.00	20.59
Feb-00	29.41	3.07	2.60	0.49	24.23	22.59
Mar-00	29.85	3.07	2.57	0.50	24.71	23.55

**Summary Statistics**

	Royalty Value <sub>u,t</sub>	Actual PBU RIV
Mean	13.05	12.45
Standard Error	1.24	1.16
Median	10.82	10.24
Standard Deviation	6.0583	5.6908
Sample Variance	36.7025	32.3851
Range	19.16	18.07
Minimum	5.55	5.48
Maximum	24.71	23.55
		298.87
Count	24	24
Confidence Level (95%)	2.5582	2.4030

#### D. Payments

The state will send the buyer a statement for the total amount due for the estimated quantity of sale oil delivered during the immediate preceding month and the estimated price applicable to those deliveries. These estimates are based on the best information reasonably available to the state at that time. As soon as the state receives more accurate information regarding quantity and price, an adjustment will be made to the next statement. Each monthly invoice will include a bill for an estimate of the of the most current production month (Initial Billing) and an adjustment to the previous production month (Initial Adjustment). If the state uses the RIV Method to set the price of sale oil, retroactive adjustments (Subsequent Adjustments) to prior production months will be necessary and could be issued at any time.

## **E. Term of Sale**

Under the proposed contract, first delivery of RIK is scheduled for January 1, 2001 and continues until the end of day on December 31, 2001. However, since this contract is to relieve market conditions, it may be extended beyond the one-year term after obtaining approval from the legislature. AS 38.06.055. It is the current intent of the department to seek legislative approval of an extension during the 2001 legislative session.

## **F. Default and Termination**

In accordance with the proposed contract, the buyer is responsible for immediately providing the state with written notice if it is insolvent or unable to pay any of its debt. Such a notice automatically terminates the state's obligations to deliver oil. The buyer is still liable for payment of previously delivered oil before the termination and for an additional 100 days of oil after termination. If a lessee invokes the force majeure clause of its Royalty Settlement Agreement, an additional 90 days will be added to the 100 days. Should the buyer default, all monetary obligations are immediately due.

The commissioner may suspend or terminate the state's obligations to sell RIK if the buyer fails to do one of the following:

- Perform any of its obligations under this agreement and cannot cure the non-performance or the non performance continues for more than 30 days after the buyer has been notified by the state of the non-performance;
- Provide written assurances satisfactory to the state of its intention to perform its obligations under this agreement and provide evidence or assurances of transportation arrangements;
- Pay in full any sum of money owed under the proposed contract within one business day after the state gives the buyer notice that payment is due and has not been paid;
- Fails or is unable to maintain the security letter of credit required;
- There is a substantial change in the buyer's financial condition, business operations, property, or ownership that may affect the buyer's ability to perform its obligations under the proposed contract;
- Any representation or warranty made by the buyer in accordance with the proposed contract is found to have been materially false or incorrect when made.

If termination is initiated by the buyer, the state requires a minimum of 100 days written notice of early termination of the contract unless the termination is invoked under the force majeure clause of the proposed contract. If a lessee invokes the force majeure clause of its Royalty Settlement Agreement, the termination shall not become effective until expiration of six months and 10 days after the notice.

## **G. Security**

Seventy-five days before the date of first delivery (October 18, 2000), the buyer is required to provide security in an amount equal to the estimated value of the oil delivered to the buyer during the 75 days following the date of first delivery. The purpose of the security is to protect

the state's interests should the buyer default on payments or is unable to take all of the sale oil nominated under the RIK contract.

The form of security may be either 1) an irrevocable stand-by letter of credit giving the state the right to draw and present drafts to the issuer through the 75<sup>th</sup> day after the state's delivery of oil; 2) guarantees of the ability to transport and dispose of at least 90-days or up to 180-days<sup>4</sup> of sale oil deliveries at all times during the term of this agreement; or 3) any combination of the forms listed above, or another form determined by the commissioner to be adequate to secure the state for 75 days deliveries of sale oil. The commissioner may in his discretion require additional security to protect the state's interests.

## **H. Successors and Assigns**

Neither party to the proposed contract may assign or encumber the agreement without first obtaining the written consent of the other party. Upon written consent, the proposed contract will be binding on any new parties.

## **III. ANALYSIS OF STATE BENEFITS**

### **A. Economic Impacts**

Taking royalty oil in-kind rather than in-value, and selling it at a premium, will have a positive economic effect on the economy of the state. The state will receive more income by selling the royalty oil at a greater cash value than it would receive if the oil were taken in-value. Although unrestricted oil revenue is no longer the largest source of state revenue for Alaska, it remains an important source of funds to help maintain a reasonable flow of dollars into the state treasury.

The royalty oil will be available for purchase by in-state refiners as well as other potential purchasers. If an in-state refiner purchases the oil, the state may experience additional economic benefits from local employment opportunities and continued local sources of refined petroleum products. There will be no negative impact if the purchaser is not an in-state refiner, because the state will still receive more income from the oil than if it were taken in-kind.

The sale of royalty oil will require little, if any, increase in administrative expenditures and will generate additional income. No additional funds are being appropriated by the legislature for the sale. Departmental staff will be able to administer the sale without requiring additional financial resources. The additional administrative requirements will be offset by the increased income the sale will produce.

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<sup>4</sup> If the lessees invoke the force majeure provisions of their RSAs, the state will not be able to "denominate" sale oil for up to 180 days. The Buyer is obligated to either continue to take the sale oil or cover the state's losses if the state has to sell it to another buyer for less than the RIK contract price.



## **B. Projected Social Impacts**

The sale will have no reasonably foreseeable negative effects on land use or local schools, roads, or other infrastructure. The oil that the state is taking in-kind is already produced and will be transported regardless of whether the state takes it's royalty in-value or in-kind. Therefore, there should not be any addition burden on schools, roads, emergency facilities, or other government infrastructure.

There could be some secondary positive impacts resulting from additional revenue to the state. The additional revenue that the state would realize from the sale of royalty oil would go to the state's general fund and from there, be distributed back to communities throughout the state. In addition, the state's permanent fund will gain additional revenue.

## **C. Projected Environmental Impacts**

The sale by itself will have no environmental impact. When the state takes its royalty in kind rather than in value, no additional oil is actually transported. The state is, in effect, claiming a portion of the oil already produced and in transportation. Therefore, there are no projected environmental effects either positive or negative related to this proposed sale of RIK.

## **IV. ANALYSIS OF SALE**

### **A. RIK disposal is in the best interests of the state.**

In accordance with AS 38.05.183(a), and 11 AAC 03.100, this finding and determination demonstrate that taking RIK and selling by competitive bid are in the best interests of the state. This RIK disposal is in the best interests of the state because the state would gain additional revenue.

### **B. The disposition is in the best interest of the state**

The disposition is in the best interest of the state because the RIK contract meets the criteria as follows:

The RIK sales price offered under the contract exceeds the royalty value of RIV. Article II of the proposed RIK contract specifies that the price of the sale oil is the Royalty Value plus a fixed premium. The Valdez Value method meets the criteria of 11 AAC 03.024(2).

### **C. The market conditions under 11 AAC 03.024(2) exist and the RIK contract will help relieve market conditions.**

The Valdez Value Method is a variant of the WTI Method but it starts with the value of RIK at Valdez and subtracts actual tariffs and quality bank adjustments to each unit where the oil is produced. Similar to the WTI Method, the state has examined the behavior of prices over the last several years and concluded that it is possible to set a Valdez Value for each unit that meets the "substantial probability" test in 11 AAC 03.024(2). One test using data from the two year

period between April 1998 and March 2000 yielded an average price for RIK oil sold from the Prudhoe bay Unit that is \$.60 per barrel more than the state received for its RIV oil. In only four months out of the 24 months in this period would the Royalty Value have been less than the RIV price.

**D. If being shipped outside, the RIK volumes are surplus to present and projected intrastate domestic and industrial needs.**

1. Any oil produced and sold through this RIK contract would have also been produced and sold as RIV oil. Satisfaction of competing needs for royalty oil will be met through the competitive bid process. Current oil supply needs of instate refiners will not be affected by the competitive bid outcomes.
2. The criteria listed in AS 38.060.070(a): See discussion below.

In addition, the sale as described above will offer maximum benefits to the citizens of Alaska. I find the following:

1. The revenue needs and fiscal condition of the state: The state depends on oil revenue and will continue to depend on oil revenues in the future. The state would gain additional funds by taking and selling royalty oil in-kind rather than in-value. The price term of the sale protects the state's interest by ensuring that revenues from this sale will exceed the in-value alternative. (AS 38.06.070(a)(1))
2. The local and regional requirements for petroleum products: No specific local or regional market for products will be affected by this RIK sale, as no additional investments will be generated in these markets
3. The desirability of localized capital investment, increased payroll, and second development effects: There should be no negative local social or economic impacts as a result of this RIK sale. Since the oil is already produced and transported, there will not be any additional burden on state or local government resources. There could, however, be some secondary positive impacts resulting from additional revenue to the state being appropriated back to communities throughout the state.
4. The social impacts of the sale: No negative social impacts are projected as a result of the sale of RIK oil. Any oil produced and sold through this RIK contract would have also been produced and sold as RIV oil. No additional construction projects are anticipated as a result of this sale.
5. The additional costs to the state and local governments caused by the development related to the transaction: There is no projected costs or other demands on the state and local governments. Any oil produced and sold through this RIK contract would have also been produced and sold as RIV oil. Therefore, there should be no additional burden on roads, schools, or other government infrastructure.

6. The local and regional labor market: No specific local or regional market for labor will be affected by this RIK sale, as no additional investments will be generated in these markets
7. Environmental effects: The sale by itself will have no negative environmental effect. (AS 38.06.070(a)(7)). When the state takes its royalty in kind rather than in value, no additional oil is actually transported. Therefore, there are no projected environmental effects either positive or negative related to this sale of RIK.
8. Impacts on existing private commercial enterprises and investment patterns: There is no negative economic impact to the state generated by this RIK sale because no additional private or public investments will be generated.

#### **E. Royalty Board and Legislative Approval**

In accordance with AS 38.06.050 and AS 38.06.055(c), the commissioner may not reissue a contract beyond one-year without legislative approval and a recommendation by the Royalty Board. This finding and determination will be submitted to the Royalty Board in compliance with AS 38.06.050 and AS 38.06.070. Under AS 38.06.070(c) the Royalty Board will make a full report to the legislature on each criterion set out in AS 38.06.070(a) for any disposition of royalty oil that requires legislative approval. The Royalty Board's report will be submitted for legislative review at the time a bill for legislative approval of this royalty oil contract is introduced in the legislature.

#### **V. CONCLUSION**

The foregoing facts and analysis support the conclusion that this RIK disposal is in the best interest of the state and offers the maximum benefits to Alaska citizens.

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John T. Shively  
Commissioner

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August 7, 2000

**Appendix A**  
**Comments and Responses on the “Preliminary Finding and Determination to Sell Royalty Oil in a Competitive Sale” date June 24, 2000.**

The state sent either a copy of the preliminary finding and draft contract or a notice announcing its availability to a 141-person mailing list. In addition, a display advertisement ran in the Anchorage Daily News on June 23, 2000. Classified legal ads ran in the Fairbanks News-Miner, the Kenai Peninsula Clarion, and the Juneau Empire.

The state received three letters about the proposed sale by the July 24, 2000 comment due date. None of those who commented opposed the proposed sale but suggested changes to the offering and/or expressed a preference for one price method over another.

**Amerada Hess Pipeline Corporation** indicated the company’s ongoing interest in the sale of royalty oil but the company would not be making a formal proposal in response to a tender at this time. Amerada Hess has pipeline capacity that it wants to make available to any RIK buyer. In order to fill its capacity Amerada Hess proposed to “work with the State.”

Response: The Buyer must make all its own transportation arrangements as a condition of the RIK contract. The state will not dictate to the Buyer with whom the Buyer must deal in making these arrangements. Because the price term in the RIK contract provides for a Tariff Allowance equal to a simple average of the lowest three TAPS tariffs, the buyer who is not a TAPS owner has the incentive to seek out the best deal for shipping on TAPS.

**Petro Star Inc.** had two comments on the proposed sale. First, while it did not object to a one-year RIK contract with the possibility of a single two-year renewal, Petro Star strongly objected to any longer term sale that would make RIK unavailable to in-state refiners. Petro Star indicated that in-state refiners (particularly whose only source of crude oil supply is available via TAPS) are “quite vulnerable to either shortages and allocation of North Slope crude or price pressure from commercial suppliers.” For this reason, Petro Star said, “the potential availability of State royalty oil is necessary to ensure that crude [from commercial suppliers] is available to the refineries at reasonable prices.”

Petro Star also indicated a concern for pricing Method II because it did not include a mechanism to capture retroactive changes to the Quality Bank adjustment. According to Petro Star, “proposed Method II would unnecessarily add purchasers of RIK oil” to the list of “parties who have substantive economic stakes” in the TAPS Quality Bank litigation.

Response: The state selected an end date of December 31, 2003 for the renewal of a one-year contract because it coincides with the termination of all of the RIK contracts now in force. The state will then have the opportunity to review its RIK program with a “clean slate.” The state will examine the benefit to local refiners identified here by Petro Star when designing new RIK disposals.

The preliminary finding indicated that the buyer should be indifferent to retroactive changes in tariffs and quality bank adjustments that result from refunds or charges arising from litigation or disputes. (Preliminary Finding at p. 16 and 18) Petro Star's comment reinforces this view.

**Williams Alaska Petroleum Inc.** expressed a concern that there would not be enough royalty oil produced from the Prudhoe Bay Unit (PBU) to supply both its entitlement under its two RIK contracts and the RIK volume proposed for Lot #9. Williams also expressed a preference for price Method I or II; in Williams' view, the accounting for Method III seems too complicated.

With the nomination of six percent of royalty oil production from the PBU for Lot #9 together with the state's desire to keep a minimum percentage of royalty oil in-value means that there is a declining margin for error in the state's forecast of royalty production through 2003. The state will use a different quantity definition. Instead of offering royalty oil for sale in lots, the state will offer approximately 35,000 barrels per day of sale oil defined as a percentage of royalty oil produced in the Duck Island Unit, Kuparuk Unit, and the Milne Point Unit. No royalty oil from the PBU will be supplied in this contract.

Although the accounting in Method III is complicated, William's is underestimating the complexity of calculating royalty value under Method I. Method I involves the use of three Royalty Settlement Agreement formulas. Method I is also subject to revisions well after the royalty oil has been delivered. This uncertainty imposes a significant cost to the buyer that must be reflected in lower bid premiums. Method II is the simplest approach but one that exposes the state (and the buyer) to potential loss if there are retroactive changes to tariffs or quality bank adjustments (see above). For this reason, the state selected Method III to calculate price.