

RIK PROGRAM OFFICE
BUSINESS PROCESSES AND PROCEDURES OVERVIEW
December 2008

Background

Through the Royalty in Kind Program, the Minerals Management Service takes royalties on crude oil and natural gas production in amount or “in kind” from the Federal lessee rather than via a cash payment, or “in value” method. The MMS then sells that crude oil or natural gas production competitively on the open market. Through the competitive sales process, the RIK Program increases the return on the American taxpayers’ crude oil and natural gas royalty assets. The RIK Program accomplishes this by: (1) improving government efficiencies, (2) reducing administrative costs, and (3) providing a fair market return on the royalty assets of the American taxpayers, typically reflected in increased revenues over the in value method.

The RIK business model was designed according to statutory authorities as a conservative, price-taker seller of energy commodities into the wholesale, upstream market. However, the model also incorporated many commercial oil and gas practices, such as use of standard industry oil and gas contracts, sales terms, and competitively based transportation and processing contracts. The organizational structure also followed typical industry design, incorporating: (1) Front Offices for management of the royalty asset, including conversion of properties to RIK, supporting the Procurement Branch in securing transportation and processing contracts, and conducting sales; (2) a Mid Office for counterparty pre-qualification and credit analysis; and (3) a Back Office to manage invoices and production imbalances. Additionally, MMS has incorporated an Economic Analysis Office with the RIK structure to compute and analyze revenue performance measurements and assist in economic analyses of oil and gas markets.

Following are the processes and procedures employed by the various RIK Program Offices to conduct activities.

A. Crude Oil and Natural Gas Front Offices

The RIK Crude Oil and Natural Gas Front Office (FO) teams are responsible for the asset management and optimization of the royalty share of oil and gas commodities produced offshore in the Gulf of Mexico (GOM), California (CA), and onshore Wyoming (WY) for properties taken in kind. The Oil and Gas FO teams are responsible for the following processes:

1. Identify and research potential properties for program consideration and convert appropriate properties
2. Coordinate with State partners

3. Secure pipeline transportation, pipeline loss/gain, quality bank, processing, and NGL bank arrangements
4. Invite, orient, and educate potential participants to the RIK program and refer participants for pre-qualifying to Mid Office
5. Market the sale via Invitation for Offer
6. Conduct the sale of the commodity
7. Set up the scheduling transaction to facilitate flow of the commodity
8. Notify the property operator of their delivery obligation to MMS
9. Troubleshoot operational issues following commodity flow
10. Brief Back Office (BO) personnel on new sales, terminated properties, transportation, processing, quality bank and pipeline loss allowance arrangements

1. Identify and research potential properties for program consideration and convert appropriate properties

Asset Managers identify and research property information on a Facility Measurement Point (FMP) property and lease level. The items researched within MMS systems include logistical and financial attributes such as FMP location and operator, pipeline(s), leases producing behind a FMP, lease type, royalty rate, lease operators, payors, royalty volume, value, and quality information.

Asset Managers build a case that outlines the benefit for the conversion of a property from royalty in value (RIV) to royalty in kind. This is accomplished by gathering information that includes pipeline maps, energy publications, transportation and downstream marketing routes, processing options, and index or market center pricing. The research is based on the existing economic status and the potential benefit to its inclusion in the RIK program. To do this analysis, transportation and processing bids, if applicable, are requested. The case is presented in a written document including all of the detailed analysis of the points provided above. An analysis is done which reviews royalties currently received by the government versus the potential gain to the government with the inclusion of the property in RIK by use of the RIV analysis tools. The comparison includes the Asset Manager's recommendation on whether or not to include the property in the RIK program along with approvals from the Oil/Gas FO Manager and the Deputy Program Manager (DPM).

For gas infill volumes on pipelines that have already been converted, a RIK/RIV analysis is completed by the Asset Manager on a property by property basis. The Gas FO Manager approves or rejects these additions. The Master List is updated for property conversions to RIK and reversions to RIV.

2. Coordinate with State partners

State partners provide an opportunity for MMS to add onshore and offshore 8(g) leases to the RIK program. Wyoming, Louisiana, Texas, and Alabama are existing state partners. The business processes used to consult and collaborate with existing and potential State partners in the RIK program are:

- Perform a detailed RIK/RIV comparison on any State shared property under consideration for RIK conversion
- If this analysis shows that it would be beneficial to take the State shared property in kind, prepare a RIK conversion brief for the affected State
- Introduce the MMS RIK program to the potential State partner for their consideration of the benefits of allowing MMS to take the leases in kind
- Upon concurrence of affected State, convert property
- Provide periodic briefings on the results of the converting the State property to RIK

3. Secure pipeline transportation, pipeline loss/gain, quality bank, processing, and NGL bank arrangements

For oil, many properties have multiple pipeline and market center options. These oil properties are analyzed by using historical data as well as the best company offer to determine pipeline flow. For gas, the conversion document outlines the optimal transport/processing/index pricing options, thus service contracts will need to be secured.

The Asset Manager will request a draft service contract from the service provider to reflect the offer terms for the service requested. The Asset Manager and the Procurement Office's Contracting Officer (CO) will discuss terms of the contract with the service provider and reach agreement. When an executable service contract is received, the Asset Manager will complete a Procurement form with signatures from the Asset Manager, Oil/Gas FO Manager, and the DPM for transmittal to the Procurement Office for final approval and execution. Current service contracts are reviewed and updated as necessary.

- The original service contract can be revised mid-term upon mutual consent by the buyer and MMS due to various operational issues. Credit worthiness is determined only for service providers paying MMS.
- The service provider must register into the Contractor Central Registration (CCR) database before payment can be made by MMS

4. Invite, orient, and educate potential participants to the RIK program and refer participants for pre-qualification to Mid Office

Asset Managers research and compile information to identify potential interested oil and gas purchasers. A robust RIK program cannot be maintained without a diverse group of commodity purchasers.

FO personnel visit potential purchasers to review and share information such as the RIK program history, business plan, RIK organization chart, contact listing, and the previous IFO and Exhibits. The timeline for the next solicitation is reviewed along with the pre-qualification process.

If companies are interested in participating in the RIK program, they are referred to the Mid Office (MO) for pre-qualification and execution of MMS base contracts.

5. Market the sale via Invitation for Offer

The IFO is prepared by the Asset Managers using plain English to describe the terms for the purchase of the RIK commodities. The IFO becomes part of the contract between MMS and the purchaser along with the signed base contract for oil and/or gas.

- The IFO contains Exhibits which describe the instructions for bidding, detailed properties, and estimated volumes for sale.
- Note: The original commodity sale contract can be revised mid-term upon mutual consent by the buyer and MMS due to various operational issues. For gas sales, the Dear Operator letter is issued prior to the sale. For oil sales, the Dear Operator letter is issued after the sale.
- For oil, analyze the crude type quality to determine whether its value will be passed back to MMS or included in the offer by the purchaser.
- For gas, assure the status of all pipeline interconnects and FMP's and that the pipeline volume is still commercial – generally at least 10,000 MMBtu/day.
- For oil, request non-arm's length transportation information from the operator to make a decision on whether the oil will be sold at the platform or at a downstream delivery point. Request updated transportation and pipeline loss allowance data and verify that the properties are still receiving the transportation incentive rate, if applicable.
- The Asset Managers email the IFO and Exhibits to potential purchasers and interested parties and ensure the IFO is posted to the RIK Web.

- The Asset Managers must notify the BO, CAM, and FM regarding any property additions, deletions, FMP changes or other attributes that would affect revenue collection or production accounting.

6. Conduct the sale

The sale process is a transparent, interactive, and open process with controls in place to award production offered in the IFO to the bidder whose offer is determined to be in the best interest of the U.S. Government. The sales process involves all of the activities that take place from receiving offers until the sales awards are made and documented.

By memorandum dated December 11, 2007, MRM's Associate Director delegated the authority to enter into, administer, or terminate oil and gas sales contracts to the RIK PD. Since this was a major change (previously, the CO had signed all sales transaction confirmations), RIK revised its procedures for oil and gas sales after December 11, 2007.

- Offers are received by the Bid Acceptance Official (BAO) via email or fax.
- The FO reviews market fundamentals and commodity package details and offers.
- The MO evaluate creditworthiness, with the BAO evaluating timeliness of the offers, whether the terms and conditions of the IFO were met, etc.
- The FO requests offer be refreshed, if necessary, and documents phone conversation on a log sheet and requires follow-up by email.
- A property that is not awarded is reverted to RIV.
- Verbal contingent award is given to the potential purchaser by the FO.
- Transaction Confirmations (TC) are prepared by the Asset Manager, approved by the Oil/Gas FO Manager and MO Manager, and signed by the RIK Program Director (PD). TCs are sent to the purchasers for their approval and signature.
- The FO informs other RIK offices and CAM of sale decisions via meetings or memorandum.

7. Set up the scheduling transaction to facilitate flow of the commodity

The "Set-up" Business Process involves all of the activities that take place immediately after the sale that are necessary to ensure commodity flow.

- Notify operators of the successful purchasers
- Provide the successful purchaser the scheduling contact information for the operators involved
- For gas, notify transport and processing plant of any new or removed properties
- For gas, prepare Agent Designation or similar, as required to notify pipeline of our new purchaser
- Production movement is set up in Entegrate (RIK accounting system) and then scheduled monthly for the term of the contract
- Amendments to the TCs are entered in Entegrate

8. Notify the property operator of their royalty obligation

Dear Operator letters are sent 30 to 45 days in advance of change from in value royalty obligation to an in kind royalty obligation or if a property reverts to in value status. The Dear Operator letter informs the operator of the properties to be taken in kind and effective date, instructions on how MMS will handle delivery, imbalances, and other operational issues. Dear Operator letters are issued if there is a change to a previous letter or enclosure such as lease status change, new operator, etc.

9. Troubleshoot operational issues following commodity flow

This business process describes the steps necessary to respond to operational issues that may occur during the term of the commodity sale. Specifically, these would be operational issues that require a commodity pricing change and/or a transportation or processing contractual change. Examples include:

- Changes in baseload gas due to production shortfalls or increases
- Diversion of commodity from the original planned route due to pipeline or gas plant constraints or any other operational issues
- Changes in pricing due to the diversion above
- Contractual price was not published

The procedures for troubleshooting operational issues are:

- Upon notification of an operational issue, identify alternative transportation and/or processing options and any impact to the contracted commodity price. Work with the operator, purchaser, and service provider, as necessary to redirect flow.
- When necessitated by the operational issue, put in place new or amended transportation and processing contracts that reflect modified flow path and prepare a modified TC reflecting any agreed upon pricing changes.
- Facilitate communication and issue resolution between pipelines, gas plants, and commodity purchasers.
- Brief BO and MO on the changes including the estimated amount of time and the new contractual arrangement details.

10. Brief Back Office on new sales, transportation, and processing arrangements

On an as needed basis, the Asset Managers brief BO staff on a pipeline “asset management” basis for new sales arrangements and associated transportation and processing contracts and terms. That is, the Asset Manager for a particular pipeline/property briefs the responsible BO staff person. As part of the briefing, the Asset Manager prepares contract briefs for transportation and processing arrangements. Maps are provided for the briefings as appropriate and are also maintained in the sales files for each pipeline or FMP.

B. Crude Oil and Natural Gas Invoicing Back Offices

The RIK Crude Oil and Natural Gas Invoicing Back Offices (BO) are responsible for the accounting activities involving the sales of RIK gas and oil to purchasers as well as the invoicing of service contracts. The activities include:

1. Invoicing (including SPR)
2. Preparation of Form MMS-2014
3. Payment application
4. Accounts reconciliation
5. File documentation
6. Statistics

The invoicing process includes invoicing purchasers and/or service providers each month for the sale of crude oil and natural gas (and related byproducts) and applicable services. The invoicing for oil and gas sales is the principal financial function of the RIK BO where the delivery of crude oil or natural gas to the purchaser is formalized as a sales transaction.

During this process the sale of crude oil and natural gas is recorded, priced, and valued in the RIK trading system. Upon verification of the components of the sale, the BO issues invoices to the appropriate customers, generates the Form MMS-2014 documents, performs payment application to the invoices upon receipt of payment, and performs any account reconciliation with disputed invoices and/or prior period adjustments received.

The BO continually communicates with RIK counterparties, RIK offices, and other MMS offices. The BO is also responsible for the accounting functions related to approved Strategic Petroleum Reserve (SPR) contracts and consistently communicates with the monthly SPR activities with internal MMS offices as well as the Department of Energy.

C. Oil and Gas Operator Imbalances Back Office

The Oil and Gas Operator Imbalances Back Office (BO) calculates, reconciles, monitors, and resolves operator imbalances monthly that are created by the difference between the entitled volume and the delivered sales volume. This monitoring process assists RIK in identifying potential delivery issues and ensures that the MMS is receiving its entitled Federal share.

The RIK Imbalance BO is responsible for the reconciling, monitoring, and resolving operator imbalances. The business processes covered are:

1. Receipt of Imbalance Statements/Operator Allocation Statements
2. Imbalance Analysis (all components of the imbalance)
3. Resolve Discrepancies
4. Property Imbalance Module
5. Imbalance Resolution
6. Statistics

The RIK Imbalance BO is responsible for reconciling, at the Facility Measurement Point (FMP) level, the monthly imbalance activities. This includes receiving, reviewing, and reconciling the appropriate operator and/or third-party documentation as well as other internal documentation received from the operator involving production and deliveries. The Imbalance BO is responsible for capturing the results of their analysis in the RIK Property Imbalance Module and performing any necessary resolution activities, which may include cashing out the cumulative imbalances.

D. Mid Office

As part of the Credit Management Policy, the RIK Mid Office (MO) and RIK senior management have adopted the following general practices and guidelines to manage credit risk from commercial counterparties, including key internal control points and

processes to minimize risk. The following are the primary business process within the RIK MO.

1. Credit Evaluation Process
2. Sale Process
3. Credit Monitoring and Exposure Evaluation

1. Credit Evaluation Process

The RIK MO credit evaluation process encompasses a set of examinations of the objective and subjective drivers that influence the overall assessment of the financial condition or “creditworthiness” of a RIK counterparty. The MMS approves a line of unsecured credit to a counterparty which establishes a level of comfort or “risk tolerance” that is acceptable to MMS, yet still allows competitive offers from the counterparty.

When new counterparties first participate in the RIK program they must obtain pre-qualification from the MO. The MO seeks counterparties who are operationally capable, financially viable, and highly reputable. Processes used to pre-qualify potential counterparties are:

- Obtain executed base contract
- Application of a commercially based scoring model to input financial data from audited company financial statements and compute a recommended credit limit
- Review of recommended credit limit by MO Manager and approval by RIK Program Director (PD)
- Recommend a security requirement in the event financials are not available or counterparty does not qualify for an unsecured credit limit

2. Sales Process:

Prior to receipt of bids, the MO must ensure a base contract has been signed and executed. Once the bids are submitted, the Bid Acceptance Official provides the MO Manager and/or credit analyst a list of bidders so that the available amount of credit for each bidder can be calculated. During the sale and bid evaluation process with the RIK team, the MO provides an overview of the credit standing of each bidding counterparty. In cases where the amount of unsecured credit is insufficient for a sale, the MO may re-evaluate a company's credit line or request secured credit in the form of a bond, letter of credit or bond.

3. Credit Monitoring and Exposure Evaluation:

After initial pre-qualification, credit scoring is conducted whenever the company's financial status changes significantly or when a credit deficiency occurs. Credit scoring is also performed when audited company financial statements are published.

To monitor and mitigate the credit risk arising from delivery of RIK production before payment is received, the MO computes the 60-day credit exposure value for each purchasing counterparty. Credit exposure is maximum value of RIK oil or gas that would be delivered to a counterparty for which MMS may not be paid. Because payment is due towards the end of month following delivery, up to 60 days of production may be delivered before a default occurs and mitigating actions can be taken. Excess credit exposure is the amount greater than the total unsecured and secured credit. In cases where the amount of unsecured credit is not sufficient to cover the 60-day value of RIK sales (due to increasing sales volumes or prices), the MO may request additional security from the purchaser.

If reasonable grounds for concern arise such as extreme deterioration of a counterparty's creditworthiness or a drop in credit rating to below investment grade, the MO may rescind the approved line of credit and require surety for the full 60 days of exposure.

E. Economic Analysis Office

The Economic Analysis Office (EAO) acts as an independent entity within the RIK program providing many different services and participating in many of the marketing and strategic decisions involved in the RIK program. The following are each individual business process within the EAO:

1. Oil Pricing Database Maintenance
2. Crude Oil and Natural Gas Revenue Performance Measurement
3. Administrative Cost Savings Measurement
4. Time Value of Money Benefit Measurement
5. Support of the Oil and Gas Front Offices

1. Oil Pricing Database Maintenance

The oil pricing database is created in an Excel spreadsheet and its history spans many years. It serves as the "official" record of prices that are ultimately entered into the Entegrate database. The database contains every price used in all oil contracts including many that are used for research purposes.

- An EAO Technician updates all pricing points on a daily basis. All the information is derived from one of three sources: Platts, Petroleum Argus, or through individual web pages. *Note: Daily gas prices are automatically fed into the Entegrate system through a licensing agreement.*
- Monthly, the EAO Technician verifies calculated monthly average to the published average in the above publications.
- Should any errors exist, the EAO Technician will revisit and correct. Daily values can be cross checked with electronic pricing data sent via each publication. After corrections are made and verified, the information is forwarded to the BO Technician who enters the data into the Entegrate system.

2. Crude Oil and Natural Gas Revenue Performance Measurement

As an independent entity, the EAO is responsible for measuring the revenue performance for both the crude oil and natural gas programs. Although each process differs slightly, the purpose of each is the same. For oil, the EAO calculates a fair market value (FMV) for the royalties sold for each FMP and compares the actual revenue to that FMV. For gas, the EAO calculates a FMV for the royalties sold for each pipeline and then compares the actual revenue received to that FMV.

For Oil: The calculation of the oil performance measures is specific to each offered property or FMP. An individual file is created for each property. Central to the calculation of the FMV benchmark is the reliance on the Minimum Acceptable Bid (MAB) computation. This value and its representative components are taken from the Oil FO's files. It details standard third-party transportation rates, quality bank considerations, sulfur considerations, pipeline loss allowance calculations, and any other cost components critical in moving the production to a market center. The MAB is generated by the Oil FO and is subject to their internal controls for accuracy and completeness.

- Obtain RIK oil volumes from MMS-2014 data specific to each property or FMP
- Calculate FMV oil value using components from the MAB
- Calculate RIK value using the bid as listed in the contract pricing summary plus the appropriate market center price from the oil pricing database, adjusted for quality bank and pipeline loss allowance.
- Calculate Oil Revenue Performance (compare FMV to RIK value)

For Gas: The calculation of the gas performance measures is performed for each offered package or pipeline. The framework for the FMV calculation is based on an estimate of the standard “third-party” industry contracts.

- By pipeline package, research transportation and processing options
- Obtain pipeline flow data from 3rd party sources (Bentek, market intelligence)
- Calculate pricing for marketing alternatives obtained from internal database containing both daily and first-of-month prices (swing and baseload values)
- Calculate 3rd party gas processing value using information obtained from Gas FO market intelligence with occasional verification from the same market sources
- Calculate 3rd party transportation rates using information obtained from Gas FO market intelligence with occasional verification from the same market sources
- Calculate FMV
- Calculate RIK value from Entegrate invoice history reports
- Calculate Gas Revenue Performance (compare FMV to RIK value)

3. Administrative Cost Savings Measurement

The costs associated with administering the RIV program are compared to those costs associated with the RIK program. Royalty production taken through the RIK program is sold under explicit commercial contract terms. These standard industry contracts provide a level of transparency in the valuation and transportation of royalty production taken in kind which may lead to a more efficient process with typically decreased costs and conflict.

Conversely, the RIV program may review and/or audit the reported value and transportation costs associated with the sales and movement of Federal production. These requirements can be very labor intensive due to the complexity of the business practices. This equates to a potential cost savings through taking royalties in kind versus in value.

To conduct this analysis, MMS separates all costs between the RIK and RIV programs into onshore and offshore. For this analysis, the Offshore Compliance and Asset Management Office (OFFCAM) costs are used. All onshore costs are currently excluded from the analysis. All offshore costs associated with each program are totaled and any final administrative cost savings are computed.

4. Time Value of Money Benefit Measurement

The EAO computes the time value of money (TVM) benefit of the RIK program on a quarterly basis. Revenue Collection Time (RCT) is a measure of the number of days after each production month that MMS takes to collect outstanding receivables for each production month. RIK payments are received 5 and 10 days earlier, for gas and oil respectively, than those payments in the RIV program. Because these payments are received earlier than they would have otherwise been received in the RIV program, an interest component is calculated for RIK payments using the number of days for which early payment was made (at an annual interest rate of 3 percent).

5. Support of the Oil and Gas Front Offices

The EAO assists both the Natural Gas and Crude Oil FOs in the analysis of different offers for the purchase of RIK natural gas or crude oil. For natural gas sales, the EAO completes the bid analysis spreadsheet to normalize offers received on different bases. For crude oil sales, the EAO maintains the data for the Oil FO to use in its Optionality Analysis. Once complete, the EAO reviews the Optionality Analysis and provides input regarding market conditions during the sale.