

RIK History and Program Development

The Department of the Interior has used the RIK approach in its Small Refiner Program since the 1970s. This Program was designed to support the domestic small refiners by providing a reliable source of supply of crude oil at equitable prices. In the mid-1990s, the MMS began exploring the potential for a more broadly applied RIK operation to increase efficiencies, decrease conflict and enhance revenues generated from oil and gas production royalties.

1. Initial Pilot Phase

In 1997, the MMS initiated a feasibility study of the U. S. Government taking its oil and gas royalties in kind, rather than in value, and competitively selling the commodities in the marketplace. The study was conducted to evaluate the merits of an RIK approach and was included in the MRM Program Reengineering Initiative. The study was also responsive to a Congressional directive, included in MMS' Fiscal Year 1997 Budget Appropriations Committee Reports, to consider additional pilot projects for both onshore and offshore oil and gas leases. The final report, titled *1997 Royalty-in-Kind Feasibility Study* was issued in August 1997.

The study aimed to determine if the implementation of a Federal RIK program would be in the best interest of the United States, and, if so, under what circumstances. The scope of the study included an examination of other governmental RIK programs, public workshops and a survey of natural gas marketing companies. The RIK Feasibility Study Team concluded that, under the right circumstances, RIK could be workable, revenue neutral or positive, and administratively more efficient for the MMS and industry. As recommended by the Study Team, MMS established a series of pilot projects to test these conclusions.

Wyoming Crude Oil RIK Pilot

In 1998, MMS and the State of Wyoming collaborated in the design and implementation of the first major RIK pilot project. The pilot involved the sale of crude oil of different qualities produced from Federal leases in the Powder River and Big Horn Basins of Wyoming. The first competitive sale was for a six-month period beginning October 1998 and involved Federal lease RIK production. Subsequent sales involved increasing volumes of production, reaching more than 6,000 barrels per day, and also included the addition of RIK production from State of Wyoming leased lands. An interim evaluation of the pilot results conducted by the State of Wyoming and MMS for the period October 1998 through March 2000 concluded that the pilot had successfully demonstrated that taking crude oil production in kind at the lease and selling it through a competitive bid process is a viable alternative to the historical method of taking royalties in value in some circumstances. Further, the pilot observed that the RIK approach reduced the period of value uncertainty for MMS and lessees from years to months; increased royalty receipts over what would have otherwise been received if collected in value; and

provided for streamlined processes that would yield administrative savings for MMS and industry. This pilot has evolved into a steady-state operation jointly managed by the MMS and State of Wyoming.

Texas 8(g) Natural Gas RIK Pilot

In 1998, MMS, in partnership with the Texas General Land Office (GLO), initiated the second RIK pilot project involving natural gas production from Federal oil and gas leases in the Texas “8(g)” zone of the Gulf of Mexico. [The “8(g)” zone refers to the area within three miles seaward of state waters, where approximately 27 percent of oil and gas lease revenues are shared with the coastal state.] The pilot goals included exploration of methods to market RIK natural gas and learning from GLO’s long-standing RIK experience. Competitive sales began in June 1999 and reached volume deliveries of approximately 55,000 MMBtu per day. An interim evaluation of the pilot results conducted by the State of Texas and MMS for the period June 1999 through December 2000 concluded that the RIK approach was viable in the administration of natural gas royalties and that the selective use of RIK provided modest increases in revenue to the MMS and additional administrative benefits for the government and industry. This pilot was later incorporated into a broader Gulf of Mexico RIK gas pilot.

General Services Administration Natural Gas RIK Pilot

Under this pilot, the MMS and General Services Administration (GSA) entered into an agreement in 1999 to take RIK natural gas from several Federal leases off the Texas coast. The gas was provided to the GSA for use in its facilities. The pilot involved a series of gas-exchange transactions between the MMS, an exchange contractor, and the GSA. Natural gas deliveries under the pilot spanned the period December 1999 through March 2001. An evaluation conducted by MMS concluded that the GSA Pilot was successful in several ways. It provided MMS with experience in initiating and managing RIK gas contracts and insights into which types of sales and transportation agreements were beneficial to the government. Importantly, the pilot demonstrated the need for MMS to seek authority to enter into and pay for transportation contracts to successfully manage RIK volumes. This authority was subsequently sought and first granted by the Congress in MMS’ Fiscal Year 2001 Budget Authorization.

Greater Gulf of Mexico Natural Gas Pilot

In April 2000, MMS initiated its first sales of RIK production under the Greater Gulf of Mexico Natural Gas Pilot. Ultimately, this pilot involved sales of approximately 500,000 MMBtu per day of Federal RIK natural gas transported on nine pipeline systems in the Gulf of Mexico. During this pilot, the MMS implemented and refined many aspects of its strategy and processes for selling RIK natural gas from offshore leases. Specific areas of focus included the management of base load and swing gas volumes; monitoring of gas imbalances and gas balances available for sale; and economic considerations for retention of gas processing rights. The pilot also provided an important baseline of market understanding needed for the development of MMS’s defined business model.

for its future RIK operations. Many of the leases involved in this pilot were incorporated into MMS' current steady-state RIK gas sales portfolio.

Gulf of Mexico Crude Oil RIK Pilot

In August 2000, MMS commenced this pilot which involved two sequential competitive sales of RIK crude oil from Federal leases in the Gulf of Mexico. This pilot, which reached sales of approximately 60,000 barrels per day, provided MMS RIK staff with important insights into the broader Gulf Coast crude oil markets, the pipeline infrastructure for serving those markets, and the processes for competitively selling crude oil from offshore leases. The pilot was terminated prematurely in order to respond to a Presidential directive issued in November 2001 to use Federal RIK oil to fill the remaining capacity of the Strategic Petroleum Reserve (SPR).

Small Refiner Program

The MMS and its predecessor agency, the U.S. Geological Survey, have, for many years, operated a Small Refiner Program where RIK crude oil is taken from Federal leases and sold to qualified small refiners. The objective of this program is to help assure adequate supplies of crude oil are available at equitable prices to eligible refiners. While not considered a pilot project, the Small Refiner Program has benefited from a number of improvements that were generated from the pilot projects. These improvements included increasing competitiveness in the program to enhance fair market value realizations, and instituting new processes for nomination and delivery of crude oil volumes to small refiners. The improvements were successfully implemented and the Small Refiner Program continues to be an important part of MMS' RIK operations. In recent years, RIK sales to small refiners have averaged between 40,000 and 60,000 barrels per day with deliveries being made from Federal OCS leases in the Gulf of Mexico and Pacific.

In conclusion, the initial Pilot Phase advanced MMS' knowledge of the oil and gas markets and experience in using commercial approaches to competitively sell production in those markets. Further, the pilots provided the MMS with an in-depth understanding of the implications of utilizing the RIK approach and the significant revenue and operational benefits from its use where appropriate. Significant advances were made in the development of MMS's:

- Business model and risk exposure criteria;
- Analytical techniques to identify candidate properties where it was advantageous to the Government to convert from RIV to RIK;
- Operational processes including billing and collection, production scheduling, volumetric imbalance reconciliations, and gravity bank adjustments;
- Recordkeeping requirements;
- Competitive sales approaches;
- Contracting strategies and legal instruments;

- Contract force majeure and closeout procedures; and
- Credit modeling and monitoring.

Most importantly, the pilots confirmed the viability of the RIK approach and its use in tandem with the RIV approach to realize the mineral revenue asset management strategy developed through the MRM's Program Reengineering Initiative. Through the implementation of its asset management strategy, MRM expected to achieve its vision of being a consummate asset manager in the pursuit of fair market value and cost effective mineral revenue collection and disbursement services. Based on the successes to date, senior MMS management made the decision in January 2001 to proceed with evolving the RIK approach from its pilot phase to an operational activity.

2. RIK Road Map – Development of the RIK Capability to Support the Royalty Asset Management Strategy

In January 2001, MMS published the *Road Map to the Future: Implementing Royalty in Kind Business Processes and Support Systems*. The Road Map was prepared to advance the RIK approach from its pilot phase to an operational activity over a 3-year period ending December 2003. The Road Map set forth the strategic direction for the design and development of the future RIK asset management process and the infrastructure needed to effectively support an ongoing RIK operation. It provided for a total of 28 actions to be taken by MMS to build core business processes within an internal control environment, acquire technology solutions, develop organizational structures and human resource capabilities, and conduct ongoing outreach and communications with customers, stakeholders and the Congress. For implementation of the Road Map, the MMS established an RIK Office within its MRM organization and formed an Operational Model environment to manage pilot operations, the Small Refiner Program and other RIK initiatives together with the planning and execution of the Road Map action elements. With this organizational approach, the MMS provided focused management of ongoing RIK operations and assured full integration of the pilot program experience base with the development of the future business model and core operational processes, information technology support systems, and organization structure and human resource requirements.

Business model and core operational processes

MMS's commercial business model and associated core operational processes were developed through the implementation of the RIK Road Map actions and conduct of expanded pilot operations. The business model, which was aligned with statutory authorities and the achievement of business objectives, positioned MMS as a conservative, price-taking seller of energy commodities into the wholesale, upstream market. MMS's business model featured the use of:

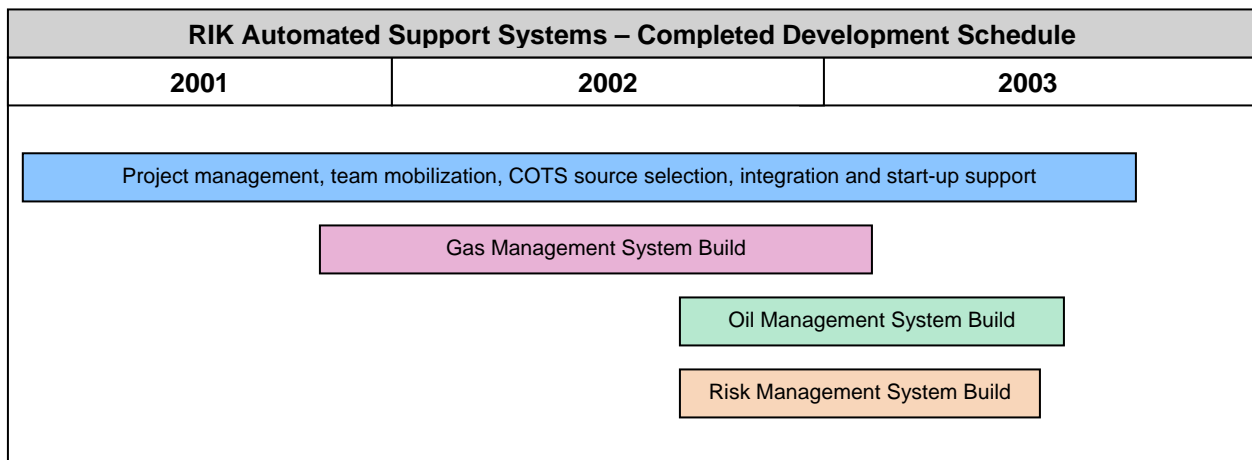
- Competitive sales, based on upstream physical spot market;
- Standard industry contracts for less than 1 year in duration;
- Competitively based short-haul transport/processing contracts;

- No fixed price, financial derivatives, or storage positions; and
- Conservative credit risk assessments.

Core operational processes, including strong internal controls, were designed, developed and implemented to support this commercial business model. Wherever possible, commercial best practices were considered in developing an efficient and cost effective process design, including capacity to utilize automated, commercial off-the-shelf, systems to support the RIK operation. The design and development effort was guided by experiences gained from pilot operations, extensive collaboration with industry counterparts to identify commercial best practices, and technical input and support from energy sector contractors.

Information Technology Solutions

With the Road Map implementation, automated systems were developed and installed to support the commercial business model, core operational processes and internal control environment. MMS engaged a major systems developer, Accenture, to install the needed information technology systems that would support the RIK business activity and fully integrate with MRM’s new Financial and Compliance systems, technical infrastructure and operations support used to manage RIV receipts. As displayed in the following Exhibit, the implementation was conducted in modular blocks which included the development of a gas management system, an oil management system and a risk management system. Rigorous project management oversight and controls were in place for the life of the development effort to assure the delivery of needed functionality within established project timeframes and budget authorizations.



Each of the delivered systems is based on commercial off-the-shelf - or “COTS” - software solutions used by the commercial sector in managing oil and gas commodity sales programs. The systems development and implementation was completed on schedule in September 2003 and within budget.

Organization and Human Resource Development

A new RIK organizational structure was designed and implemented to manage the RIK operation. The organization was permanently placed in the MRM program with leadership provided by a Program Director at the Senior Executive Service level. The organization is based on an industry-standard front office, mid office and back office structure and supports a strong internal control environment. The front office is responsible for managing crude oil and natural gas marketing and sales activities; the mid office provides credit, risk control and contract management services; and the back office provides supporting settlement and accounting services. The three-office structure ensures appropriate checks and balances and maintenance of data integrity, security and accountability. Additionally, an independent Chief Risk Officer (CRO) position at the SES level was established to provide independent review of operations, the internal control environment, and risks encountered in the RIK operation. The CRO reports to the MRM Associate Director and a MMS senior management Executive Committee. With the Road Map execution, substantial progress was accomplished in implementing the new organizational structure. Completion of the organizational implementation was achieved in December 2004 with follow-on actions included in the Five Year Plan.

Significant progress was made in increasing the MRM staffing levels committed to the RIK operation as well as advancing the skill sets needed for successful program performance. While considerable knowledge was gained in the development and operation of the RIK pilot program, additional focus was placed on internal and industry-based workforce training initiatives to increase the MRM program's capability to support an expanding RIK pilot operation.

3. Pilot Operations and Transition

The execution of the MRM RIK Road Map was highly dependant on the continuing and expanding Operational Model that encompassed all RIK pilot operations, the Small Refiner Program and an initiative to fill the SPR. The ongoing pilots and performance assessments provided an increased base of knowledge and experience to advance the business process design, systems implementation, and organization and resource development. The pilots also provided the operating experience to further refine MMS's business model, sales strategies, logistical capabilities, and understanding of the conditions under which use of the RIK option is advantageous to the Government as compared to the RIV option. This increased understanding translated into improved targeting of properties with RIK potential and analytical capabilities to determine suitability for conversion to the RIK option.

Expanded Pilot Operations

The Operational Model focused its oil and gas pilot operations on Federal leases located in the Gulf of Mexico and the established crude oil pilot with the State of Wyoming. Continuing experience with and assessment of the pilots identified a variety of opportunities for potential use of the RIK option. Among these opportunities was the potential for the MRM to increase its competitive position and potentially its revenue receipts by transporting oil and gas production away from leased lands for sale at market centers. Additional advantages were also identified with the processing of natural gas prior to sale. In order to proceed with pilots to explore these opportunities, the MMS sought and received budgetary authority from the Congress to use RIK revenue receipts to pay for transportation and processing costs. (The Government incurs these costs in both RIK and RIV situations.) Through use of the budgetary authority, MMS was able to significantly expand its natural gas pilot in the Gulf of Mexico and realize significant revenue uplifts and increased administrative efficiencies.

SPR Fill Initiative

In November 2001, the President of the United States made the decision to fill the remaining capacity of the SPR using royalty oil from Federal leases in the Gulf of Mexico. MMS had previously used this approach to supply 28 million barrels of royalty oil to the SPR beginning in 1999. In response to the Presidential directive of 2001, MMS, in partnership with the Department of Energy (DOE) and close consultation with the industry, developed and executed a strategy to accomplish the delivery of more than 120 million barrels of RIK crude oil to onshore crude oil market centers for use by the DOE in filling SPR sites in southern Louisiana and Texas. The size, complexity of logistics, and duration of the initiative presented a variety of significant challenges for both the government and industry. The RIK deliveries for the fill initiative were successfully concluded in August 2005.

MMS/State of Louisiana Oil and Gas Pilot

In March 2003, the State of Louisiana and MMS entered into a cooperative agreement to undertake an RIK pilot involving Federal oil and gas leases in the Louisiana 8(g) zone of the Gulf of Mexico. The pilot involved the sale of both oil and gas which was bundled with larger RIK production volumes being transported on common service pipelines. The MMS and Louisiana realized significant revenue uplifts on both oil and gas. RIK volumes continue to the present to be managed under this cooperative agreement.

Strategic Planning for the Future

In October 2002, the MMS had well advanced the completion of the action elements of the RIK Road Map and, in so doing, had established the internal capability to manage a sizeable RIK portfolio. Oil and gas pilot operations consistently demonstrated the viability of the RIK approach and yielded substantial benefits including revenue uplift, administrative savings, reduced accounting and compliance cycles, and accelerated

cash flows. Additional benefits were being realized through the use of RIK crude oil to fill the SPR and the continuing support of the small refiner industry which served as an important fuel supply source for the Department of Defense. The MMS Executive Committee, composed of the bureau's Senior Executive Service leadership, identified the need for a strategic planning effort to further advance RIK business operations as a permanent part the MMS' future royalty asset management strategy.

Independent Assessment of RIK Capability

Prior to advancing a strategic planning initiative, the MMS senior leadership first sought commercial input and an assessment of MMS's RIK capability from a respected oil and gas consulting firm. In January 2003, MMS engaged the Lukens Energy Group to evaluate the capabilities and performance of the RIK operation, make recommendations for improvement, and provide advice on a five year strategic business plan for the RIK operation.

The Lukens Energy Group concluded in a series of reports, including the final assessment report issued in September 2003, that the MMS RIK business model had performed well in a volatile marketplace, and that the program had evolved from pilot projects to a well-developed operational program. Improvements in several areas were recommended prior to a significant expansion of the program. Specifically, MMS's level of commercial expertise was found to be improved, but thin to support an expansion. Capabilities in performance measurement, quantitative economic analysis, and more complex marketing and sales were found to need enhancement. Finally, the consultant recommended specific program principles and measurable objectives for use by the MMS in guiding the RIK operation in future years.

With the input from the Lukens Energy Group, the MMS Executive Committee proceeded with a focused strategic business planning effort which fully involved MMS senior leaders, managers and technical staff; industry consultants; and program stakeholders. In May 2004, the MMS published for implementation the *Five Year Royalty in Kind Business Plan* (Five Year Plan) to guide RIK business development and operations through 2009.