

Impact of Offshore Gas Drilling on the Virginia Capes Operating Area

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October 8, 2007

The Deep Ocean Energy Resources (DOER) Act as passed by the U.S. House of Representatives in June 2006 would have lifted the moratorium on offshore oil and natural gas drilling off the east coast of the United States, but that provision was deleted from the final version of the bill. In April 2007 a second effort was made to lift the moratorium on offshore oil and natural gas drilling off the coast of Virginia, but it was defeated in the Senate in June 2007. The proposal would have permitted drilling for natural gas beyond 50 miles from the coast, with coastal states being able to ban drilling between 50 and 100 miles from the coast if they so choose. Drilling beyond 100 miles from the coast would have been controlled by the Federal Government.

The DOER Act created offshore drilling zones for each coastal state in which royalties from natural gas production would be shared between the Federal Government and coastal state governments. The offshore drilling zone for Virginia as defined by the Department of the Interior is shown in orange in Figure 1 at the end of this paper. The zone desired by Virginia but not approved is shown in red.

Impact on the Virginia Capes Operating Area

As can be seen in Figure 1, most of Virginia's offshore natural gas drilling zone lies inside the boundaries of the U.S. Navy's Virginia Capes Operating Area. Approximately 72% of the zone desired by Virginia lies inside the Virginia Capes Operating Area. The importance of the Virginia Capes Operating Area to the Navy is unarguable:

Ranges and operational areas (OPAREAs) are locations where Navy personnel train to accomplish their mission of national defense. The Navy has geographically grouped its ranges and OPAREAs to form range complexes, which are organized and managed to optimize training opportunities in a safe and controlled environment. The ranges and facilities of the VACAPES Range Complex are unique and provide training opportunities essential for the safety and readiness of military personnel and the success of the military mission. The protection of natural and cultural resources is also an integral component of this training. Navy training activities incorporate protective measures as standard operating procedure to promote environmental conservation.

The VACAPES Range Complex represents an essential combination of land, sea and air space that provides realistic training areas for Navy personnel. For nearly a century the area has supported Navy training activities, and is now host to a wide range of training every year to ensure the nation's military are fully prepared when in harm's way.

It is the principal training area for air, surface and submarine units located in Hampton Roads, Virginia. The VACAPES Range Complex is also the primary homeport of the Atlantic Fleet. The Hampton Roads area includes more than 80,000 active duty Navy personnel. In addition to serving as the site for essential Navy training, the VACAPES

Range Complex is host to activities for the research, development, test and evaluation of emerging technologies.

Realistic training is the single greatest asset the military has in preparing and protecting Navy personnel. “Train As We Fight” is not just a phrase - it is a statement of the absolute necessity to realistically train Navy personnel for the conditions in which they may find themselves while protecting the nation.

International events, changes in naval strategy, base closures, and population growth are increasing the challenges the Navy faces in training its personnel to be prepared to defend the nation. To face these challenges and continue to provide combat capable forces that are ready to deploy worldwide, the Navy is comprehensively evaluating and planning activities at the range complex level.¹

The Navy has also provided its intentions regarding the future of the Virginia Capes Operating Area:

Support the current training. The Navy currently trains throughout the Range Complex and must preserve that ability.

Increase some training from current levels as necessary. This ensures units are “surge ready,” meaning they can deploy on short notice if required.

Accommodate new missions. The Navy’s training needs are constantly evolving and we need to be responsive to changing global demands. Additionally, the Navy needs to train with new vessels, aircraft, and weapons systems as they are introduced in the VACAPES Range Complex.

Implement enhanced range complex capabilities. New technologies are emerging and improving the way we train. The Navy must be able to make full use of these technologies to continue to ensure the best trained and equipped military in the world. Upgrades and modernization of existing range capabilities and facilities are necessary to enhance and sustain Navy training in the VACAPES Range Complex.²

In response to the Congressional proposal to expand offshore drilling for oil and natural gas, the Navy, in its role as Executive Agent for the Department of Defense for outer continental shelf (OCS) matters, provided its views on drilling in DOD offshore training areas to the Minerals Management Service.

As a user of the oceans, navigational waters, and air space above the OCS, the Navy and Air Force have maintained a keen interest in preserving unrestricted access to these areas and ensuring that national security associated with ongoing training and testing activities are not adversely affected by activities that occur in the OCS. Our commanders have told us that unrestricted use of critical sea ranges, warning areas, and military airspace

¹ Naval Facilities Engineering Command Atlantic, Virginia Capes Operating Area Environmental Impact Statement, <http://www.vacapesrangecomplexeis.com/EIS.aspx>. Originally posted December 2006.

² Ibid.

operating areas is essential to naval exercises, pilot training, and live ordnance and weapon system testing and evaluation. Drilling rigs and related structures, because of their height and size would be hazardous to low flying drone aircraft and missiles and military exercises would be hazardous to operations associated with oil and gas resources development. To prevent such incompatible encroachment, DoD has sought to discourage oil and gas development that would interfere with current and future military uses of the OCS.³

This leaves no doubt that drilling for natural gas inside the Virginia Capes Operating Area would constitute incompatible encroachment on the ability of the Navy and Air Force to conduct training and testing in the area. To even consider such a proposal at a time when the Virginia Capes Operating Area is used heavily for training Navy and Air Force combat units for the war in Iraq and the broader War on Terror is unconscionable.

Projected Royalties from Natural Gas Drilling

The only way that Virginia can accrue the large royalties projected from drilling for natural gas in Virginia's offshore zone would be to ignore Navy and Air Force Training requirements and advocate incompatible encroachment on the Virginia Capes Operating Area. If Virginia chooses to support the Navy and Air Force and not permit drilling inside the Virginia Capes Operating Area, then its royalties drop significantly.

Dr. James Koch of the Center for Regional Studies has estimated that under the revenue sharing scheme contained in the DOER Act, Virginia could gain \$3 billion in royalties over twenty years.⁴ If drilling were not permitted in the 72% of Virginia's offshore zone that lies within the Virginia Capes Operating Area and the estimated reserves are distributed evenly across the zone, then estimated royalties would drop to \$840 million over 20 years, an average of \$42 million a year. Although any new revenues would be a welcome addition to Virginia's budget, it would only have constituted a 1% increase in revenues in Fiscal Year 2007 – and only about 7% of the budget deficit brought on by the decline in the housing market.

If Virginia is not successful in having its offshore drilling zone expanded as it desires, revenues would be even lower, approximately \$8.5 million a year under the same assumptions used above. Given that Virginia failed to have the boundaries of its offshore zone expanded in the last round of debate on this proposal, there is little reason for optimism that Virginia will be successful in the future.

³ Donald R. Schregardus, Deputy Assistant Secretary (Environment), Department of the Navy, letter to the Minerals Management Service, October 7, 2005. Also see Dale Eisman, "Military opposes offshore Va. Drilling plan," The Virginian-Pilot, April 27, 2006, <http://home.hamptonroads.com/stories/print.cfm?story=103567&ran=37829>.

⁴ Dale Eisman, "U.S. House votes to lift ban on offshore drilling," The Virginian-Pilot, June 30, 2006, <http://home.hamptonroads.com/stories/print.cfm?story=106872&ran=173901>.

Attempting to project the royalties Virginia would receive from offshore oil drilling is further complicated by the fact that the entire part of the zone in which Virginia makes the drilling decision – from 50 miles to 100 miles off the coast – is within the Virginia Capes Operating Area, which extends about 155 miles off the coast. The remainder of the zone – from 100 miles to 200 miles off the coast – is exclusively controlled by the Federal Government. Virginia thus has no say in drilling decisions in the only part of its zone that is outside the Virginia Capes Operating Area: hardly a suitable basis for projecting future gas royalties.

Impact on Energy Independence and Natural Gas Prices

Proponents of drilling for natural gas frequently claim that it will help reduce U.S. dependence on imported natural gas and help reduce natural gas prices.⁵ A closer look at the data casts doubts on those assertions.

No official projection of annual natural gas production from Virginia's offshore zone has been published, but an average annual production rate of 16.35 billion cubic feet would exhaust the estimated reserves of 327 billion cubic feet⁶ in twenty years. Although actual production probably would not reach that level, I will use it to show the maximum possible impact that offshore drilling could have. An average production rate of 16.35 billion cubic feet per year would only be about 0.4% of average annual natural gas imports over the last five years (4.15 trillion cubic feet): much less than annual fluctuations in imports, which have varied as much as 5% from the average.⁷ Additionally, an average production rate of 16.35 billion cubic feet per year would only be about 0.08% of average annual U.S. domestic natural gas production over the last five years.⁸ Again, those percentages undoubtedly are overly optimistic. Given that natural gas production in Virginia's offshore zone is such a tiny fraction of imports and overall U.S. domestic production, it will have almost no impact on energy independence.

The impact of natural gas production from Virginia's offshore zone on energy independence becomes infinitesimal if drilling is not permitted in the Virginia Capes Operating Area. The worst case would be if the estimated natural gas reserves are distributed evenly across Virginia's zone and the 72% of the reserves inside the Virginia Capes Operating Area cannot be pumped out. In that case average annual production over twenty years would be only 0.1% of average annual natural gas imports over the last five years and only 0.02% of average annual U.S.

⁵ Representative Thelma Drake, "Drake Votes to Reduce Nation's Dependence on Foreign Energy," press release, June 29, 2006.

⁶ Dale Eisman, "Virginia-backed gas exploration proposal shot down by Senate," The Virginian-Pilot, June 15, 2007, <http://home.hamptonroads.com/stories/print.cfm?story=126727&ran=49775>

⁷ Energy Information Administration, "U.S. Natural Gas Imports (MMcf)," <http://tonto.eia.doe.gov/dnav/ng/hist/n9100us2m.htm>

⁸ Energy Information Administration, "Natural Gas Gross Withdrawals and Production," http://tonto.eia.doe.gov/dnav/ng/ng_prod_sum_dc_u_NUS_a.htm

domestic natural gas production over the last five years. In all likelihood wells outside the Virginia Capes Operating Area would be able to access some of the reserves inside the area, but that production still would have almost no impact on energy independence.

Given that natural gas production from Virginia's offshore zone would be only a tiny fraction of annual natural gas imports and annual U.S. domestic natural gas production, it follows that it will have almost no impact on natural gas prices. The average wellhead price for natural gas in January-June 2006, when Dr. Koch was calculating his estimate of Virginia's royalties, was \$6.84 per thousand cubic feet. Over the past five years, the wellhead price for natural gas has ranged from a low of \$2.19 to a high of \$10.35 per thousand cubic feet. As of July 2007 the price was \$6.19 per thousand cubic feet.⁹ The price of imported natural gas also has fluctuated widely over the last five years, from a low of \$3.15 to a high of \$8.12 per thousand cubic feet. As of March 2007, the most recent month for which data is available, the price of imported natural gas was \$7.45 per thousand cubic feet.¹⁰ It is inconceivable that gas production from Virginia's offshore zone – 0.4% of average annual imports and 0.08% of average annual U.S. domestic production over the last five years – would have measurable impact on natural gas prices.

Conclusion

The alleged economic and state revenue benefits of drilling for natural gas off the coast of Virginia have been greatly exaggerated and do not outweigh the serious negative impact on U.S. national security if drilling were permitted in the 72% of the offshore natural gas drilling zone that lies inside the U.S. Navy's Virginia Capes Operating Area. For this reason alone, not even considering environmental concerns, the Commonwealth of Virginia should not pursue drilling for natural gas off its coast.

⁹ Energy Information Administration, "U.S. Natural Gas Wellhead Price (Dollars per Thousand Cubic Feet)," <http://tonto.eia.doe.gov/dnav/ng/hist/n9190us3m.htm>.

¹⁰ Energy Information Administration, "Natural Gas Summary," http://tonto.eia.doe.gov/dnav/ng/ng_sum_lsum_dcunus_m.htm.



72% of the offshore drilling zone desired by Virginia is within the Virginia Capes Operating Area

Area as defined by the Department of Interior

Area desired by Virginia

- Legend**
- 12 nm Territorial Limit
 - ▭ VACAPES Operating Area (OPAREA)
 - ▨ TACTS Range
 - ▭ Warning Area
 - ▭ Restricted Airspace
 - ▭ Military Operating Area (MOA)

Virginia Capes (VACAPES) Range Complex

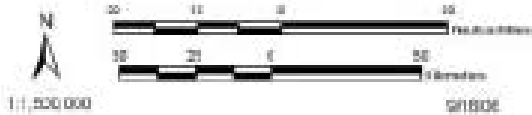


Figure 1. Virginia Capes Operating Area vs. Gas Exploration Area