

## Doughnut Holes in the Gulf of Mexico

*David Applegate*

### Introduction

In April 1997 the US Minerals Management Service (MMS) held a lease sale on deep water tracts in the Gulf of Mexico due south of Louisiana, receiving bids for tracts in the northern part of the sale area but none in the southern part. Could the lack of interest on the part of oil companies be because of deep water depths, changing reservoir characteristics, inadequate seismic coverage or other technical problems? In part. But another reason may well be uncertainty over whether the tracts were the United States government's to lease in the first place.

### An Old Issue Resurfaces

The unbidded tracts all lie within or adjacent to an area of the Gulf that is more than 200 nautical miles (nm) from the coast of either the US or Mexico. Known as the western 'doughnut hole', or 'gap', it is one of two such areas in the Gulf. The eastern doughnut hole lies off the coast of Florida beyond the 200nm limits of the US, Mexico and Cuba. It is not currently being considered for exploitation.

MMS held the lease sale with the expectation that the western doughnut hole would soon be divided equally between the US and Mexico, and that the lease tracts would fall within the US portion. The only problem with this expectation was the Mexican government's announcement that it will not negotiate on the doughnut holes until the US Senate ratifies a 1978 treaty that establish US-Mexico maritime boundaries in the Gulf, arguing that that one cannot change boundaries that have never been fully approved. That treaty defined a provisional boundary beyond 12nm territorial waters (agreed in 1970) between the US claimed fisheries jurisdiction and Mexico's Exclusive Economic Zone (EEZ), out to 200nm in the Gulf of Mexico and Pacific Ocean.

When the treaty was negotiated, the US State Department was primarily concerned about finding rights and obtaining the best boundary possible in the Pacific, where rich fishing banks were at stake. Although the treaty also covered subsea resources, they were considered of secondary importance. But the treaty was not ratified in the Senate, in large part because a legendary petroleum geologist, the late Hollis Hedberg, did not see it that way. Hedberg

argued that vast petroleum resources were at stake in the deep waters of the Gulf, and that the treaty gave away too much future domestic production.

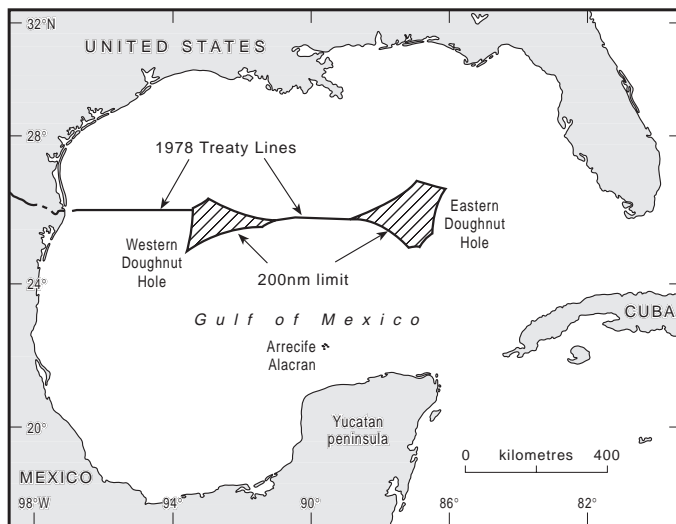
Hedberg's views received the backing of the American Association of Petroleum Geologists (AAPG), but the major petroleum companies showed little interest, sharing the State Department's view that this was a fishing rights treaty. After all, drilling technology did not allow production in the water depths at stake in the negotiations. Hedberg believed, however, that new technology would someday make such development possible. He was right – and those same companies that were not concerned about the treaty when it was negotiated are now eager to see the matter settled and exploration begin.

In that, they are joined by the Departments of the Interior and State, as well as a group of Gulf Coast Senators who are urging their colleagues to ratify the 1978 treaty. In doing so, they make the case that Hedberg's long-term goal of increased domestic production can best be achieved by ratifying the treaty in order to fill in the remaining holes.

### A Matter of Islands

The 1978 Treaty was the follow-up to an earlier diplomatic exchange of letters that took place in 1976, on the need for a boundary to divide each state's 200nm jurisdictional claims. Boundaries had been established in 1970 (entering into force in 1972) out to 12nm from the US and Mexican coasts, but in 1976 both countries moved to establish sovereignty out to 200nm from their coasts. Mexico asserted an EEZ, but the United States only claimed fishing rights. It was not until 1983 that the US also adopted the 200-mile limit as its EEZ.

The key decision facing the treaty negotiators was whether to draw the 200-mile limits from the coast of the mainland or from islands sitting on the continental shelf. By measuring the limit from several US islands off California, the United States obtained rights to prime Pacific fishing banks. Mexico was amenable to such a boundary if the United States then recognised several small islands off the coast of the Yucatan Peninsula and drew the boundary out 200 miles from them. Doing so would



expand Mexico's maritime jurisdiction in the Gulf and greatly reduce the deep-water area beyond either country's 200nm limit, leaving only the two 'doughnut holes' to be negotiated later.

### Senate Hearing on Boundaries

The treaty was taken up by the Senate in 1980, at which time the Committee on Foreign Relations held a hearing to examine its provisions. Testimony was given by a State Department legal adviser, a representative of the commercial fishing industry, and Hedberg.

The State Department official argued that the use of islands in the determining the boundaries gave the United States rich fishing banks in the Pacific and secured naval lanes to San Diego. The only mention of subsea mineral resources was the potential for drilling offshore of California, a somewhat ironic position now in the light of the current long-term moratorium that is likely to become permanent.

The president of the Tuna Research Foundation testified that fishing activity in the Gulf was minor in comparison to that in the Pacific, arguing that the United States should focus on getting the best boundary possible in the Pacific, regardless of the compromises that had to be made in the Gulf.

Then Hedberg spoke as the lone dissenting voice on how the continental margin should be divided in the Gulf of Mexico. In language seldom heard in the halls of Congress, Hedberg argued that petroleum production had come from;

*the landward limb of the huge semi-circular geosyncline of thick sediments whose axis lies some distance offshore paralleling the periphery of the Gulf. However, the undrilled seaward limb of this sediment-filled trough,*

*rising basinward under the deep waters beyond the slope, may also be abundantly petroliferous.*

As evidence, he cited a research hole on the Sigsbee Knolls off Yucatan made by the Joint Oceanographic Institutions for Deep Earth Sampling (JOIDES) program that encountered oil in salt domes. Hedberg concluded that ratification of the treaty would needlessly give away:

*more than a million acres of our most promising offshore petroleum territory at a time when domestic petroleum resources are of paramount importance to this country.*

At the time he testified, Hedberg was an emeritus professor at Princeton University following a distinguished career in both industry and academia. He had already been involved for many years in ocean-floor boundary issues, publishing a number of papers on the ocean's geology and jurisdictional boundaries, and was a major contributor to the development of the Law of the Sea. In his testimony, Hedberg argued that the continental shelf itself, rather than any islands poking up on it, should be the basis for international boundaries, and showed a number of alternative boundary lines much more favourable to the US in the Gulf.

The State Department dismissed his "scholarly" views on islands, citing US interests in its western Pacific islands as well as those off the California coast – but Hedberg drew a careful distinction between islands on the shelf and islands in the deep ocean. In the case of the former he argued that the base of the slope should be the boundary, whereas in the latter each island has its own boundaries.

The hearing record also contains a telegram from AAPG endorsing Hedberg's testimony. The AAPG position was developed by an *ad hoc* committee chaired by Hedberg, and it was published as a letter in the *Explorer*. (The letter/report was followed in a subsequent issue of the *Explorer* by a letter from former US Geological Survey (USGS) director Vincent McKelvey arguing against AAPG's position.) Signed by then-President Robey R. Clark, the telegram states the association's position,

*that in a time of great concern for our energy supplies, our country cannot afford to give away areas possibly containing important mineral resources for the sake of expediency in resolving boundary negotiations.*

The statement went on to urge that a separate mineral resource boundary be negotiated rather than losing the potential area through a treaty “*which does not specifically consider mineral resources.*”

Hedberg’s arguments fell on deaf ears in the committee which unanimously approved the treaty and sent it to the Senate floor for a final vote – but several senators, led by Senator Rudy Boschwitz (Republican – Minnesota) took up Hedberg’s arguments and urged a delay of ratification until the USGS could prepare an assessment. By the time the study was completed in 1982, however, momentum for the treaty had stalled, and it was never brought up again. Seventeen years later, the treaty is still pending before the Senate.

### Going Deeper

In the intervening time, a great deal has changed in deep-water oil exploration. The MMS lease sale that took place in April – and many others just like it – were unthinkable 20 years ago, but the development of 3D seismic, horizontal drilling technology, improved deep water platforms and other advances have made deep-water exploration a reality. For example, a well was drilled in water depths of 7,625ft only 22 miles north of the provisional US-Mexico boundary. And last year Congress passed and the President signed legislation to provide royalty relief for leases in the deep waters of the Gulf, further accelerating development there.

Hedberg’s concern about the importance of domestic petroleum resources has lost none of its relevance in the intervening years. After three successive years of importing more than half of its oil, the United States arguably faces greater concerns now than it did in 1980 – but with the price of gasoline low, neither political party has shown much interest in addressing ways to increase domestic production.

Nevertheless, ratification of the boundary treaty may well be added to the list of congressional actions taken to encourage domestic oil production. Although, in a sense, the purpose of ratification is to produce further negotiations, they will not be to redraw the boundaries set in the treaty, but only to divide up the western doughnut hole. The provisional boundaries themselves have been *de facto* in effect for nearly two decades, and it is no longer feasible to discount the Yucatan islets and instead use the base of the slope as Hedberg sought to do.

Although many of Hedberg’s ideas were adopted in the Law of the Sea, his island theories were not, and

international law precludes the sort of boundaries that Hedberg sought. Consequently, no amount of renegotiation could change the location of the doughnut holes – the best that can be done now is to get on with filling them in. Doing so will contribute to Hedberg’s long-term goal of increased US exploration for petroleum resources in the Gulf.

But as the deep water exploration continues to expand, one cannot help but wonder whether the tuna fishing off the Pacific coast, so important to US negotiators in 1978, was worth the seafloor given up in the Gulf of Mexico. Hollis Hedberg did not think so, and he was usually right.

*STOP PRESS* - The US Senate finally ratified the 1978 Treaty about Maritime Boundaries between the United States of America and the United Mexican States on 23 October 1997.

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David Applegate is a member of the American Geological Institute. This article is based on a “Special Report” which appeared in the AAPG *Explorer*, reproduced by kind permission.