BOEM
Bureau of Ocean Energy Management

FIXING CALIFORNIA'S SUBMERGED LANDS ACT BOUNDARY

A Federal-State Success Story

Introduction & Background

The purpose of this paper is to describe the history behind, concepts employed, and processes undertaken by the United States and the State of California to permanently immobilize California's seaward boundary under the Submerged Lands Act (SLA). 43 U.S.C. §§1301 *et seq*. The SLA dispute between United States and California started in the ea**r**ly 1900s and resulted in a challenge before the United States Supreme Court over rights to minerals offshore the State of California. In the historic case of *United States* v. *California*, 332 U.S. 19 (1947), the United States claimed it was

> [T]the owner in fee simple of, or possessed of paramount rights in and powers over, the lands, minerals and other things of value underlying the Pacific Ocean, lying seaward of the ordinary low water mark on the coast of California and outside of the inland waters of the State, extending seaward three nautical miles and bounded on the north and south, respectively, by the northern and southern boundaries of the State of California.

Id. at 23. California challenged the United States assertion by arguing that they were the owners of all submerged lands extending seaward three English miles from the low water mark within the original boundaries of the state. In 1947, the Supreme Court of the United States ruled in favor of the federal claim, finding that the United States had paramount rights in and powers over the three nautical mile belt seaward off the California coast.[1] A Special Master was appointed by the Court to determine the ordinary low water and outer limit of inland waters for specific portions of the California's coast line. The Special Master issued its report in 1952, to which both parties noted exceptions.

In response to the Supreme Court's ruling in *U.S. v. California*, supra, Congress in 1953, enacted the SLA, which established in coastal states "title to and ownership of the lands beneath navigable waters within [their respective] boundaries…and the natural resources within such lands and waters." 43 U.S.C. §1311(a). For coastal states, including California, this meant title and ownership of submerged lands within three geographical miles from their coast line, as such term is defined in the SLA.[2] As the court later confirmed, because the SLA provides that the State - Federal boundary is determined from

[1] That same year the Supreme Court of the United States issued a decree holding that "[t]he United States of America is now, and has been at all times pertinent hereto, possessed of paramount rights in, and full dominion and power over, the lands, minerals and other things underlying the Pacific Ocean lying seaward of the ordinary low water mark on the coast of California, and outside of the inland waters, extending seaward three nautical miles . . . . The State of California has no title thereto or property interest therein." *United States* v. *California*, 332 U.S. 804, 805, *Order and Decree*.

[2] The only exceptions are Texas and the west coast of Florida, where State jurisdiction extends from the coast line to no more than 3 marine leagues (16.668 km) into the Gulf of Mexico. *United States* v. *Louisiana, Texas, Mississippi, Alabama,* and *Florida*, 363 U.S. 1 (1960)(On May 31, 1960, the Supreme Court held that Texas and Florida are entitled to rights in the submerged lands extending for a distance in the Gulf of Mexico of 3 marine leagues from their coast lines, but that Louisiana, Mississippi, and Alabama are entitled to rights extending no more than 3 geographic miles from their coast lines). "The term "coast line" means the line of ordinary low water along that portion of the coast which is in direct contact with the open sea and the line marking the seaward limit of inland waters." 43 U.S.C. §1301(c). .

the State's coast line, it can change, or ambulate, with coast line changes that result from erosion and accretion.

In 1963, the "United States filed an amended complaint reviving the Special Master's Report and redescribing the issues as modified by the Submerged Lands Act; both the United States and California filed new exceptions to the Report." *United States* v. *California*, 381 U.S. 139, 149 (1965). In 1966, the Court issued a supplemental decree (382 U.S. 448)(1966)(the "First Supplemental Decree"), which provided that California had "title to and ownership of the tidelands along its coast … and the submerged lands, minerals, other natural resources and improvements underlying the inland waters and the waters of the Pacific Ocean within three geographical miles seaward from the coast line." *Id.* at 452. The First Supplemental Decree provided that (1) the subsoil and seabed of the continental shelf more than three geographical miles seaward from the coast line appertain to the United States and (2) the coast line was ambulatory in that it had to be "taken as heretofore or hereafter modified by natural or artificial means." *Id*. at 449. Following the First Supplemental Decree, years of source data evaluation, field work, and compromise were needed to establish the location of California's "coast line." Once agreed to, the computational process of projecting the SLA boundary seaward from the coast began. Large scale diagrams delineating the boundary were developed. Three additional supplemental decrees were issued by the Court between 1977 and 1981.[3]

In 1986, Congress amended the SLA to provide that the SLA boundary between a State and the United States remains immobilized when the coordinates of such boundary are established under a final decree of the United States Supreme Court:

> [A]ny boundary between a State and the United States under this Act which has been or is hereafter fixed by coordinates under a final decree of the United States Supreme Court shall remain immobilized at the coordinates provided under such decree and shall not be ambulatory.

Outer Continental Shelf Lands Act Amendments of 1986, Pub. L. No. 99-272, Tit. VIII, § 8005, 100 Stat. 151 (43 U.S.C. §1301(b)).

Between 2001 and 2009, the United States and California approved over 600 diagrams depicting their shared boundary. With the legal issues resolved, the technical questions answered, and the mathematical computations completed, a convergence of resources, effort, and desire finally coalesced. In 2013, a joint motion was filed by the United States and the State of California before the Supreme Court to permanently fix the offshore SLA boundary. Finally, on December 15, 2014, a significant chapter in 70 years of submerged lands litigation between the United States and California was closed with the issuance of the fifth supplemental decree by the Court. *United States* v. *California*, 135 S. Ct. 563 (2014) (the "Fifth Supplemental Decree"). As provided in the Memorandum in Support of Joint Motion for entry of a Supplemental Decree, the

[3] 432 U.S. 40, 40-42 (1977) (further delineating the lines marking the outer limits of inland waters and artificial extensions of the coast line); 439 U.S. 30, 30-31 (1978) (clarifying the rights of the parties in the submerged lands surrounding the Channel Islands National Monument and the land area near the Anacapa and Santa Barbara Islands); 449 U.S. 408, 408-410 (1981) (delineating the lines marking the outer limits of the inland waters of the Port of San Pedro and San Diego Bay).

> United States and California have reached an agreement on proposed fixed coordinates for the federal-state boundary in the area offshore of California. To determine the coordinates for the fixed federal-state boundary, the parties: (1) identified the most seaward points of the coastline of California, including coastlines of offshore islands; and (2) projected lines three nautical miles (a nautical mile is equivalent to a geographical mile, see *United States* v. *California*, 381 U.S. 139, 148 n.8 (1965)) seaward from those points. The result is a single line parallel to the California mainland, and closed lines surrounding the individual islands or groups of islands. These lines are mutually acceptable to the United States and California and consistent with Section 2(b) of the Submerged Lands Act, 43 U.S.C. §1310(b), for demarcating the submerged lands rights of the parties.

Memorandum in Support of Joint Motion for entry of a Supplemental Decree, p. 5. The Fifth Supplemental Decree had the effect of immobilizing the SLA boundary at the decreed coordinates in accordance with Section 2(b) of the SLA, 43 U.S.C. §1301(b); thus preventing those boundary changes that would otherwise occur with erosion or accretion of the California "coast line."

Mapping the Outer Continental Shelf

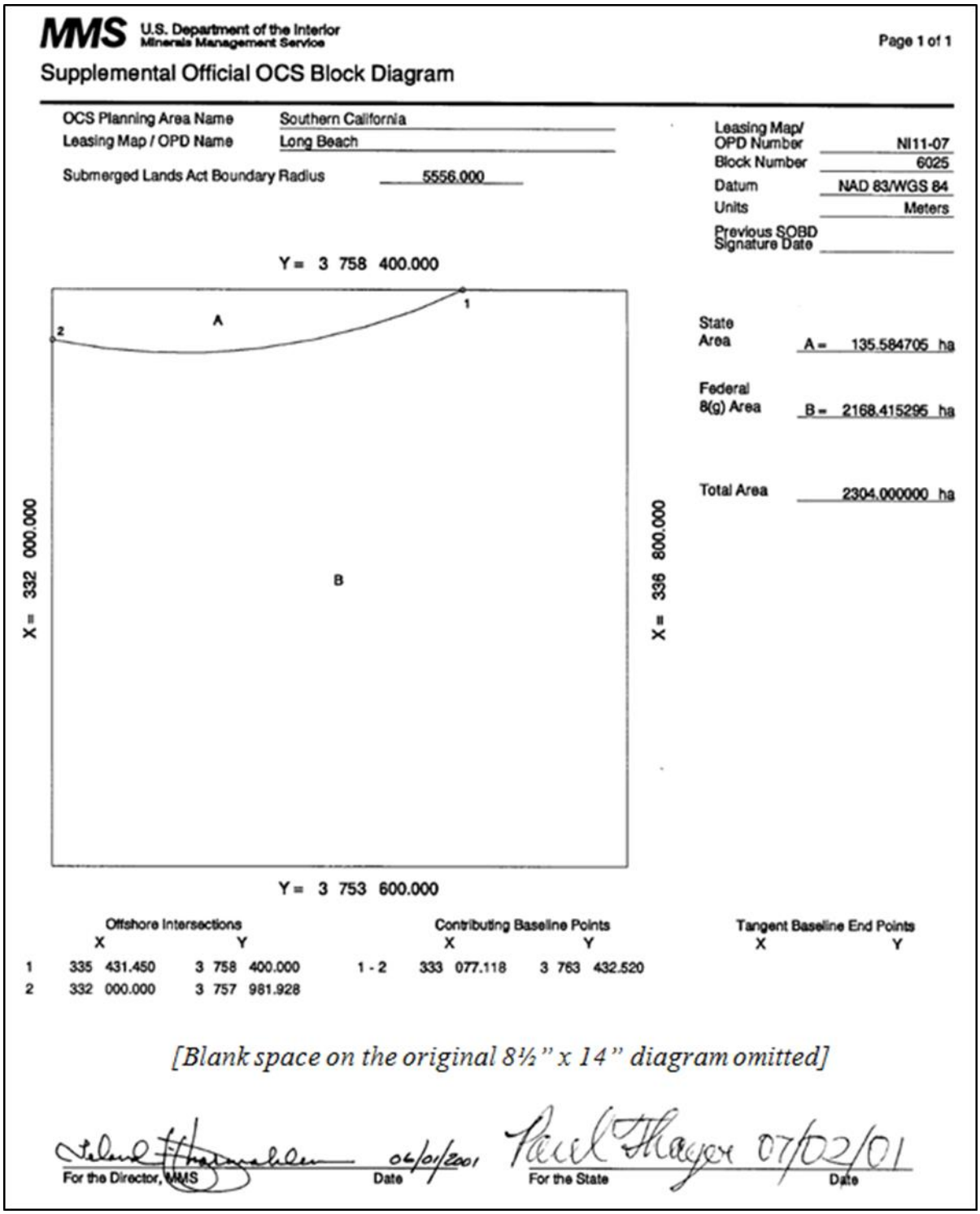
The U.S. Department of the Interior, Bureau of Ocean Energy Management (BOEM) [formerly the Minerals Management Service (MMS)] is responsible for the administration and issuance of leases for the orderly and safe development of the natural resources on the Outer Continental Shelf (OCS).[4] The description of areas leased or areas to be leased are OCS Blocks or fractions thereof. Under 30 C.F.R. § 556.8, OCS Blocks and offshore submerged land boundaries are depicted on OCS Leasing Maps, OCS Official Protraction Diagrams, and Supplemental Official OCS Block Diagrams (SOBDs).

The cadastre offshore of the Alaska, Atlantic, Gulf of Mexico, and Pacific coasts is demarcated on Official Protraction Diagrams (OPDs). OPDs are defined on the Universal Transverse Mercator grid system, in meters, at a scale of 1:250,000. OPDs are further subdivided into OCS Blocks, generally 4800 meters on a side. SOBDs are created for each OCS Block intersected by the SLA boundary.

SOBDs depict the final results of the analytical process to graphically depict and define the boundary intersecting a given OCS Block (Figure 1). A prerequisite to immobilizing the SLA boundary are SOBDs signed by the Chief, Mapping and Boundary Branch, as delegated by the Director of BOEM and an authorized representative of the coastal State.

SOBD signatures indicate concurrence with the methodology used to develop and define the baseline (SLA coast line) points and the mathematical integrity of the boundary projection from those base points. Signatures confirm that both parties agree that the coordinates accurately define their common boundary for SLA purposes.

[4] In 2010, MMS was renamed as the Bureau of Ocean Energy Management, Regulation and Enforcement (BOEMRE). By Secretarial Order in 2011, BOEMRE was divided into two agencies: BOEM and the Bureau of Safety and Environmental Enforcement. To avoid confusion, in this document we use "BOEM" when referring to either the MMS or BOEMRE.



MMS U.S. Department of the Interior Minerals Management Service

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Supplemental Official OCS Block Diagram

OCS Planning Area Name: Southern California
Leasing Map / OPD Name: Long Beach
Submerged Lands Act Boundary Radius: 5556.000

Leasing Map/ OPD Number: NI11-07
Block Number: 6025
Datum: NAD 83/WGS 84
Units: Meters
Previous SOBD Signature Date:

Y = 3 758 400.000

Y = 3 753 600.000

State Area: A = 135.584705 ha
Federal 8(g) Area: B = 2168.415295 ha
Total Area: 2304.000000 ha

	Offshore Intersections X	Offshore Intersections Y	Contributing Baseline Points	Contributing Baseline Points X	Contributing Baseline Points Y	Tangent Baseline End Points X	Tangent Baseline End Points Y
1	335 431.450	3 758 400.000	1 - 2	333 077.118	3 763 432.520		
2	332 000.000	3 757 981.928					

[Blank space on the original 8½" x 14" diagram omitted]

For the Director, MMS — Date 04/01/2001

For the State — Date 07/02/01

Figure 1: Supplemental Official OCS Block Diagram

Defining the "Coast line"

In *United States* v. *California*, 381 U.S. 139 (1965), the Supreme Court adopted the 1958 Geneva Convention on the Territorial Sea and the Contiguous Zone (the "Convention") for purposes of the SLA:

> It is our opinion that we best fill our responsibility of giving content to the words which Congress employed by adopting the best and most workable definitions available. The Convention on the Territorial Sea and the Contiguous Zone … provides such definitions. We adopt them for purposes of the Submerged Lands Act. This establishes a single coastline for both the administration of the Submerged Lands Act and the conduct of our future international relations[.]

Id. at 165. From this decision forward, the U.S. and coastal states have used the Convention principles, as interpreted and decided by the Supreme Court, for purposes of establishing their common boundary. However, numerous other references are also consulted in this process. Particularly helpful is *Shore and Sea Boundaries*, volumes 1 and 2 by Aaron L. Shalowitz, and volume 3 by Michael W. Reed. These sources have guided federal and state agencies, legal authorities, and marine boundary technicians through the complexities of their tasks.

In the First Supplemental Decree, the Supreme Court clarified some of the uncertainties within the marine boundary community regarding terms used within the SLA. Among others, these include:

2. As used in herein, "coast line" means –
   (a) The line of mean lower low water on the mainland, on islands, and on low-tide elevations lying wholly or partly within three geographical miles from the line of mean lower low water on the mainland or on an island; and
   (b) The line marking the seaward limit of inland waters.

   The coast line is to be taken as heretofore or hereafter modified by natural or artificial means, and includes the outermost permanent harbor works that form an integral part of the harbor system within the meaning of Article 8 of the Convention on the Territorial Sea and the Contiguous Zone, T.I.A.S. No. 5639, hereinafter referred to as the "Convention."

3. As used herein –
   (a) 'Island' means a naturally-formed area of land surrounded by water, which is above the level of mean high water;
   (b) 'Low-tide elevation' means a naturally-formed area of land surrounded by water at mean lower low water, which is above the level of mean lower low water but not above the level of mean high water…

Id. at 449-450. The grant from the SLA is measured from the "coast line," which corresponds to the "baseline" from which the United States measures its territorial sea under the Convention. *U.S.* v. *Alaska*, 521 U.S. 1 (1997). The term "coast line" is defined in the SLA as the "line of ordinary low water along that portion of the coast which is in direct contact with the open sea and the line marking

the seaward limit of inland waters." 43 U.S.C. §1301(c). Therefore, the coast line consists of two components: the line of mean lower low water, and the seaward limit of inland waters.

As stated above, in the First Supplemental Decree the Court defined "coast line" as an ambulatory line established by the principles outlined in the Convention. Article 3 of the Convention provides that "the normal baseline for measuring the breadth of the territorial sea is the low-water line along the coast as marked on large-scale charts officially recognized by the coastal State."

Every coast line has its unique characteristics and defining impacts on the resulting projected boundary. California's coast consists of hundreds of thousands of offshore rocks. Article 11 of the Convention defines a low-tide elevation as "a naturally formed area of land which is surrounded by and above water at low-tide but submerged at high tide…" Depending on its relationship to and distance from the mainland and adjacent offshore features, the most seaward of these may qualify as coast line points from which to measure the SLA boundary. Rocks below mean lower low water do not qualify, so their elevations must be determined from the best available data. Source data will vary by origin, date, scale, and detail. But the methods used to evaluate the source and identify the salient features are based on all relevant principles, conventions, and judicial decisions.

Mapping the Coast Line[5]

The evaluation process for establishing the coast line points begins with the largest scale, most current nautical charts. Article 3 of the Convention does not require the use of nautical charts for baseline point determination; it requires that the chart datum depicted on said charts is used. For much of California, the National Ocean Service (NOS) [formerly Coast and Geodetic Survey (C&GS)] Coast and General Series charts, such as Chart 18700 at scale 1:216,116 (Figure 2) are the largest scales available. Such charts, intended for navigation, are not ideal for coast line determination. At such scales, shorelines are generalized and offshore rocks sometimes are intentionally repositioned to emphasize their danger to the mariner or to ensure they are not lost in the clutter of other features and navigational information. For these reasons, both parties agreed to use the larger scale C&GS topographic T-sheets and hydrographic surveys when available.

Hundreds of C&GS and NOS source documents were researched to establish the coast line used for the Fifth Supplemental Decree. 212 of the most current and largest scales for a given area were agreed to. Map scales (and number of items) encompassed 1:200 (1), 1:5,000 (6), 1:10,000 (151), 1:18,000 (1), 1:20,000 (32), 1:40,000 (15), 1:50,000 (3), 1:80,000 (1) and 1:100,000 (2). Horizontal datums included unspecified graticules with C&GS inscribed North American Datum of 1927 (NAD 27) adjustment ticks, as well as notated NAD 27 and North American Datum of 1983 (NAD 83) graticules. Topographic sheets, some of which were plane table surveys, and hydrographic surveys that were used ranged from publication dates of 1926 to 1978. Nautical charts used were published between 1979 and 1999. Where data was still lacking, horizontally positioned field work and tide-coordinated reconnaissance were performed to derive that information. Citing a NAD 83 epoch year and/or a positional accuracy measurement to satisfy the National Standard for Spatial Data Accuracy for this farrago would be meaningless.

[5] The technical process for mapping the coast line is the same process as for mapping the baseline.

For purposes of permanently immobilizing ("fixing") California's SLA boundary, the parties agreed that 4000 base points met the Convention's criteria. The base points were digitized from the original source documents, and *the associated coordinates were treated as absolute values* for datum transformation via NADCON, when necessary, and for subsequent boundary projection.

The SLA boundary is determined by mathematically projecting a line three nautical miles seaward from the coast line. The cartographers consider all of the coast line points in the process. The 'envelope line' formed by all intersecting arc and line segments is computed by a mapping software that scans three miles forward and backward along the coast line to determine which coast line points will contribute to the most seaward limits. The coast line points and seaward limits that generate the boundary segments are recorded. The cartographers then perform geometric tests and integrity checks. The arc and line segments are ordered in their proper sequence and the points of intersection between connecting segments are determined. The resulting series of coordinates are then transformed into the boundary description portion, as the one included in the Fifth Supplemental Decree.

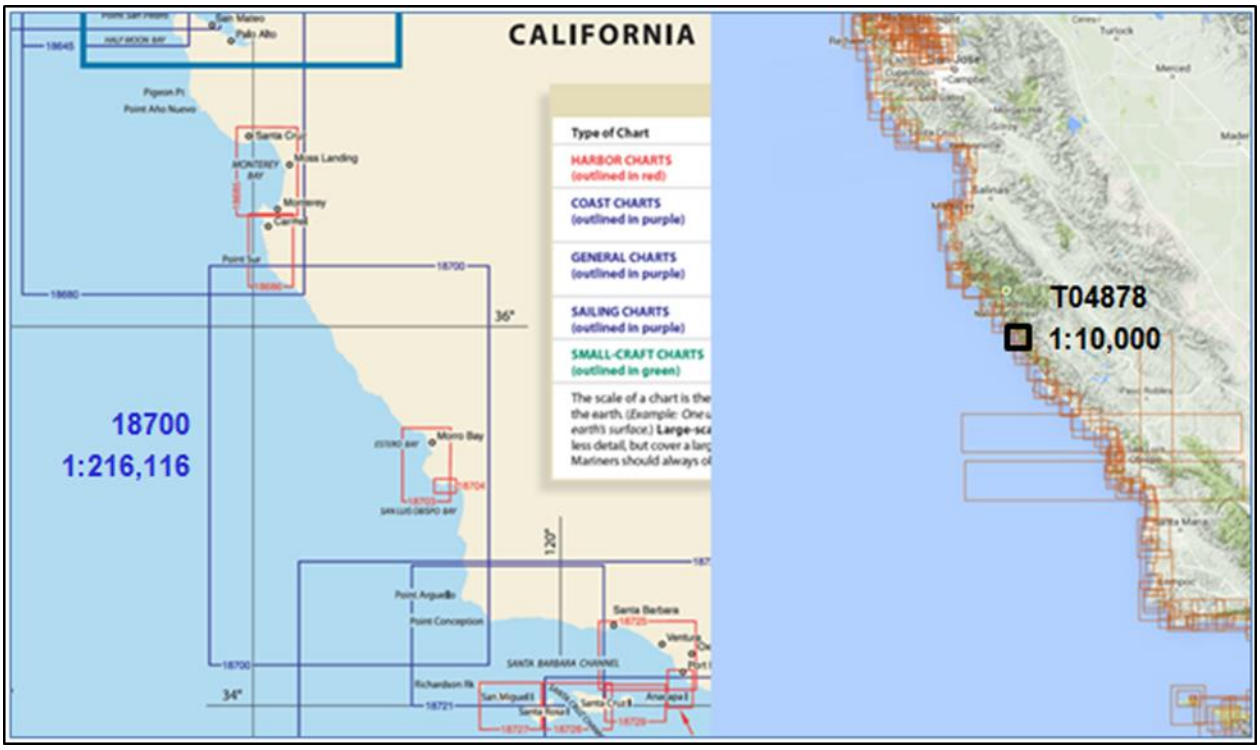

Figure 2: Nautical Chart 18700 and T-sheet T04878

Nautical Mile/Geographical Mile

On July 1, 1954, the U.S. Departments of Commerce and Defense adopted the international nautical mile defined as 1852 meters exactly or 6076.10333 U.S. Survey Feet or 6076.11549 International Feet approximately. This was announced in the National Bureau of Standards (now the National Institute of

Standards and Technology) Technical New Bulletin of August 1954, and subsequently confirmed in 59 Fed. Reg. 5442 (July 1, 1959).

In *United States* v. *California*, 381 U.S. 139, 149 (1965), the Court provided that "[o]ne English, statute, or land mile equals approximately .87 geographical, marine, or nautical mile." *Id.* at 148 n.8. Since the First Supplemental Decree - in which the Supreme Court defined "Geographical mile" as the distance of 1852 meters (6076.10333…U.S. Survey Feet or approximately 6076.11549 International Feet) - geographical and nautical miles have been used interchangeably for SLA purposes.

Datums: NAD 83 and WGS 84

The Fifth Supplemental Decree considers NAD 83 equivalent to WGS 84. Current guidance regarding datums supports this:

> In the U.S., the North American Datum of 1983 (NAD 83), the World Geodetic System of 1984 (WGS 84), or the International Terrestrial Reference Frame (ITRF) of 1992-2000 are all acceptable horizontal datums and are considered to be equal to each other for most positional accuracy requirements.

Marine Managed Areas: Best Practices for Boundary Making. *Marine Boundary Working Group, Federal Geographic Data Committee, 2006.*

In 1991, BOEM published in the Federal Register an implementation plan for converting the offshore cadastre from NAD 27 to NAD 83. 56 Fed. Reg. 20020 (May 1, 1991). In 1993, BOEM developed a more specific two-part project plan. This plan was titled the *Project Plan for Implementing NAD 83 in the Minerals Management Service, Part II: Technical Aspects of Implementation* (the "BOEM Implementation Plan"), which provided that:

- "[T]he [BOEM] will use NAD 83 (1986) coordinates for all baseline, projected boundary, and other computations;
- HARN coordinates (NAD 83 (199x)) will not be used; and
- For [BOEM] purposes WGS 84 is considered equal to NAD 83 offshore Alaska and the conterminous U.S. "

In 1992, BOEM adopted NADCON v.2.00 or better as the agency's standard horizontal datum transformation software, and reiterated that, for its purposes, "the World Geodetic System of 1984 (WGS 84) is considered equivalent to NAD 83 offshore of Alaska and the conterminous United States." 57 Fed. Reg. 5168 (February 12, 1992).

It is understood that the two datums are fundamentally different, and that each uses a different ellipsoid. Future decrees and OPD editions will acknowledge that NAD 83 and WGS 84 are technically not the same, but for purposes of the SLA, they are considered equivalent. The datum tag is the reference to which national adjustment of the subject coordinates are referred to, and an epoch date is the decimal year date for which the stated coordinates are valid in relation to the reference frame. When applicable, these two important data elements will be included in future decrees that fix the SLA boundary.

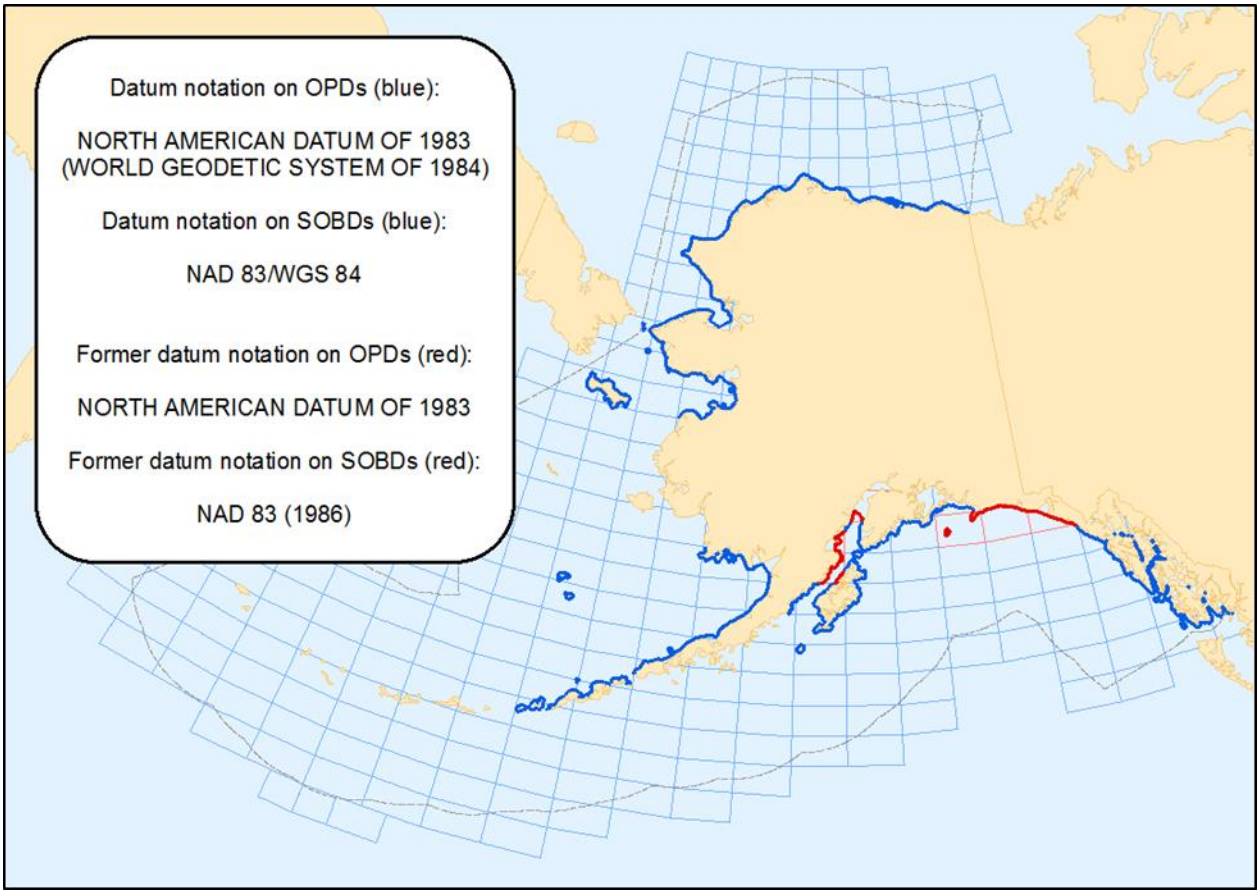

Figure 3: Current and Former Datum Designations on BOEM Official Protraction Diagrams and Supplemental Official Block Diagrams for Alaska

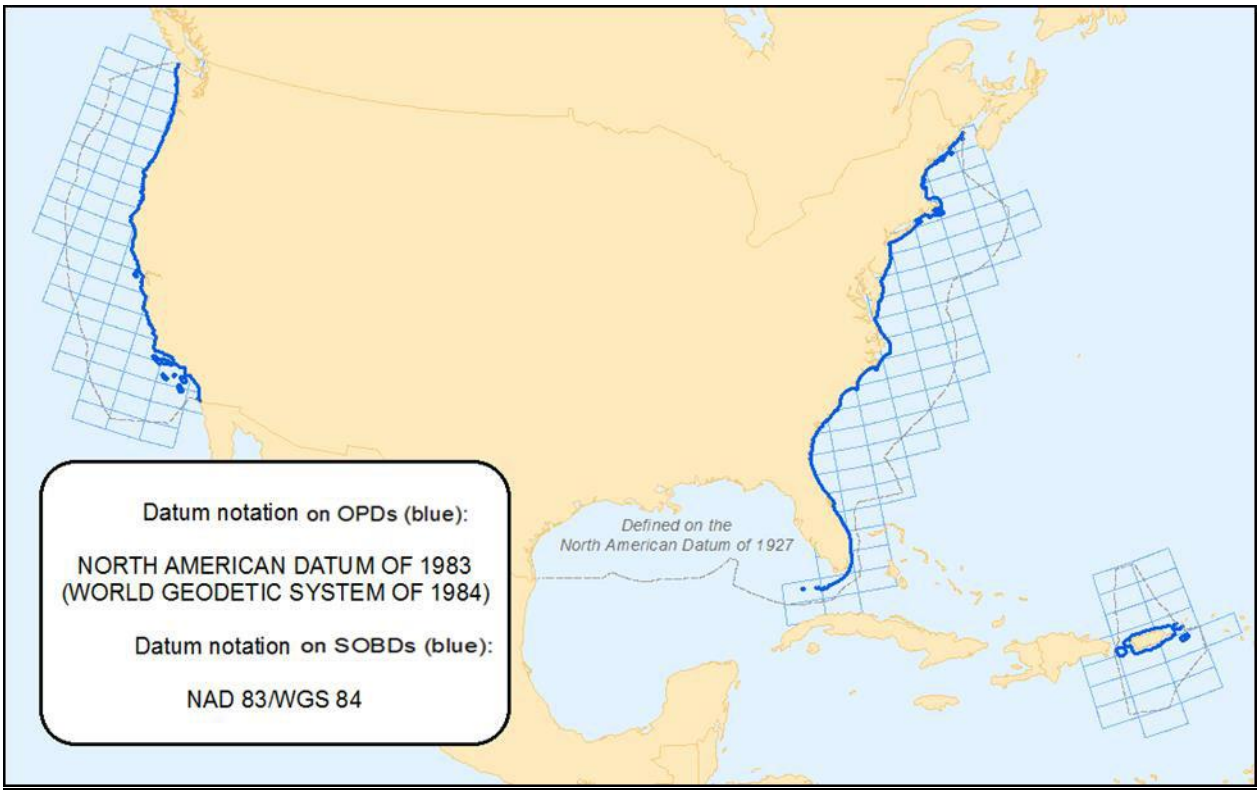

Figure 4: Current Datum Designations on BOEM Official Protraction Diagrams and Supplemental Official Block Diagrams for Pacific, Atlantic, and Caribbean Areas.

UTM Zones

The State of California spans two Universal Transverse Mercator (UTM) zones. The Fifth Supplemental Decree includes coordinates in both UTM Zone 10 and UTM Zone 11 defined to a thousandth of a meter. The Fifth Supplemental Decree consists of three Exhibits that include the California mainland and islands offshore.

All limitations of planar map projections, such as the common practice of applying a grid scale factor of 1 throughout the diagram, and planar mathematical boundary projection on a ellipsoid model, are recognized and accepted for this purpose and are in accordance with the BOEM Implementation Plan.

Accuracy of the Coordinates

Federal mapping on the OCS has historically employed different datums and a variety of map projections, with varying precisions.

In 1954, the Bureau of Land Management (BLM) developed the first OCS Leasing Maps for areas offshore of Louisiana. The rectangular coordinates were defined to a thousandth of a foot (Figure 5).

In the 1980s, BOEM created a non-geospatial database for the BOEM Implementation Plan. The database contained current and historic NAD 27 data and the new NAD 83 block and boundary data.

The coordinates reflected four different State Plane Coordinate Systems and three different UTM-based cadastres. Also stored was data from other agencies, such as National Marine Sanctuaries, managed by NOAA. During the development of California's SLA boundary, the Monterey Bay National Marine Sanctuary, wherein mineral development is prohibited, was established and defined by geographic coordinates with five decimal seconds. This high level of precision was retained in the BOEM database.

For BOEM's implementation of NAD 83, existing leases and boundary data based on a wide range of coordinates were transformed and/or converted into NAD 83 meters. For the BOEM Implementation Plan and California's SLA boundary, BOEM made the decision to treat all existing coordinates as absolute values, and all new coordinates as absolute values defined to three decimals of a meter. This equates to a very acceptable level of accuracy, which was agreed to by officials from the State of California. Further, it is worth mentioning that the Fifth Supplemental Decree is modeled after the earlier decrees, such as *United States* v. *Alaska*, 530 U.S. 1021 (2000), which also fixed the SLA boundary with coordinates defined to a thousandth of a meter and designated as "NAD 83/WGS 84."

In addition to Alaska and California, coastal state partners Georgia, Maryland, Massachusetts, New Hampshire, New York, Oregon, and Washington have signed SOBDs offshore their respective states defined to a thousandth of a meter and designated as "NAD 83/WGS 84." South Carolina has signed SOBDs defined to a thousandth of a meter and designated as "NAD 83 (1986)." While NAD 27 is used by BOEM in the Gulf of Mexico, the principles and methodologies followed are identical to what is used for Alaska and the Atlantic and Pacific coast states. Florida and Texas have signed SLA boundary SOBDs with coordinates defined to a hundredth of a foot, while Alabama, Mississippi, and Texas have signed off on coordinates defined to a thousandth of a foot.

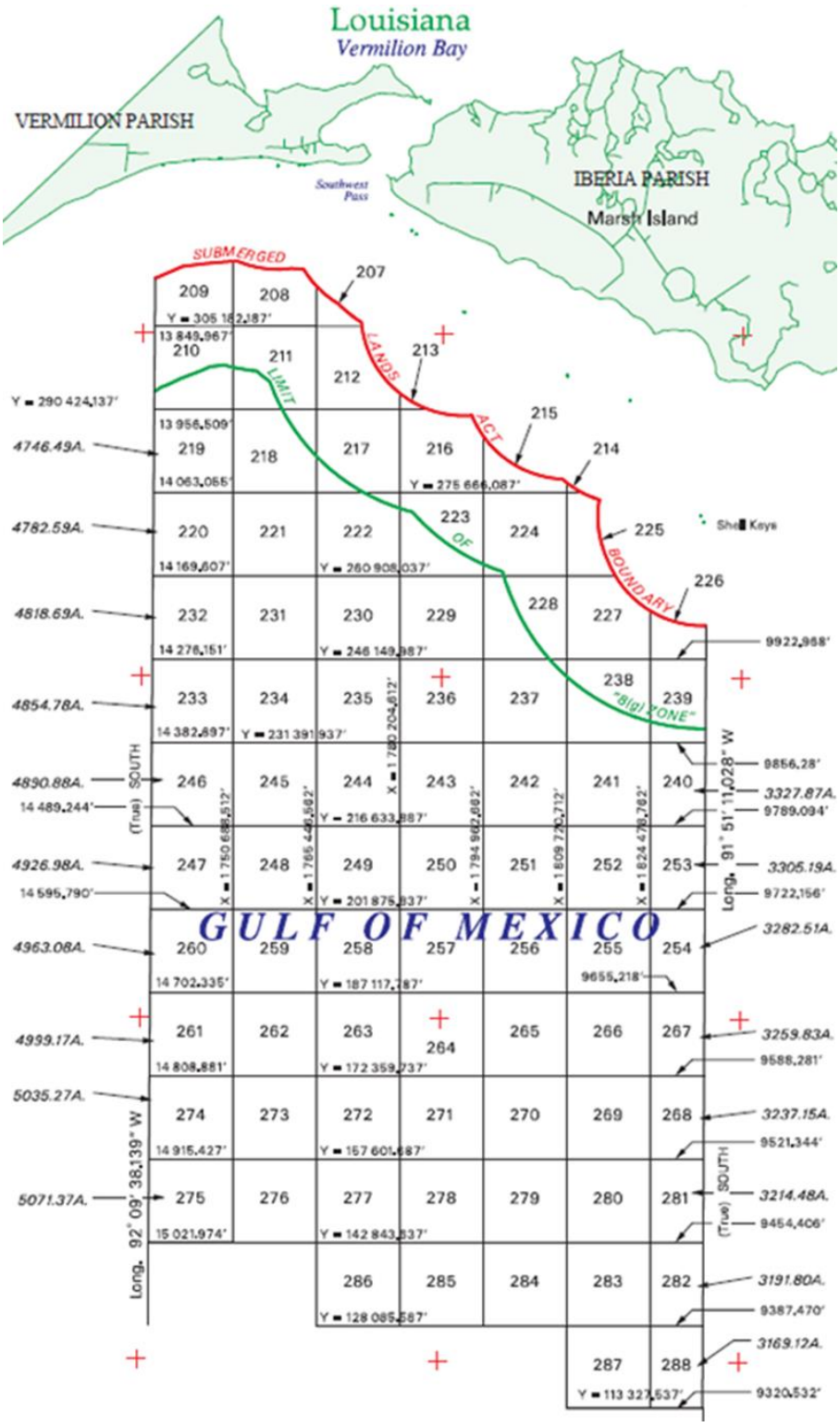

Figure 5: OCS Leasing Map LA3D – 2000 edition

Projecting the SLA Boundary from the Coast Line

As used in the Fifth Supplemental Decree, the term "parallel" is consistent with Article 6 of the Convention, which provides that "[t]he outer limit of the territorial sea is the line every point of which is at a distance from the nearest point of the baseline equal to the breadth of the territorial sea."

The projection of California's SLA boundary from the coast line agreed to by both parties, as provided in the Fifth Supplemental Decree, is in line with the parameters in Article 6 of the Convention for determining the outer limit of the territorial sea. In the Fifth Supplemental Decree, California's coast line coordinates are treated as an absolute value, and the mathematical projection from the coast line uses the three nautical mile value of 5556 meters exactly. Therefore, the fixed SLA boundary is parallel to the coast line agreed to by both parties. Further, since California's SLA boundary was established pursuant to a final decree of the Supreme Court, such boundary is fixed and no longer ambulatory or dependent on the coast line. 43 U.S.C. §1301(b).

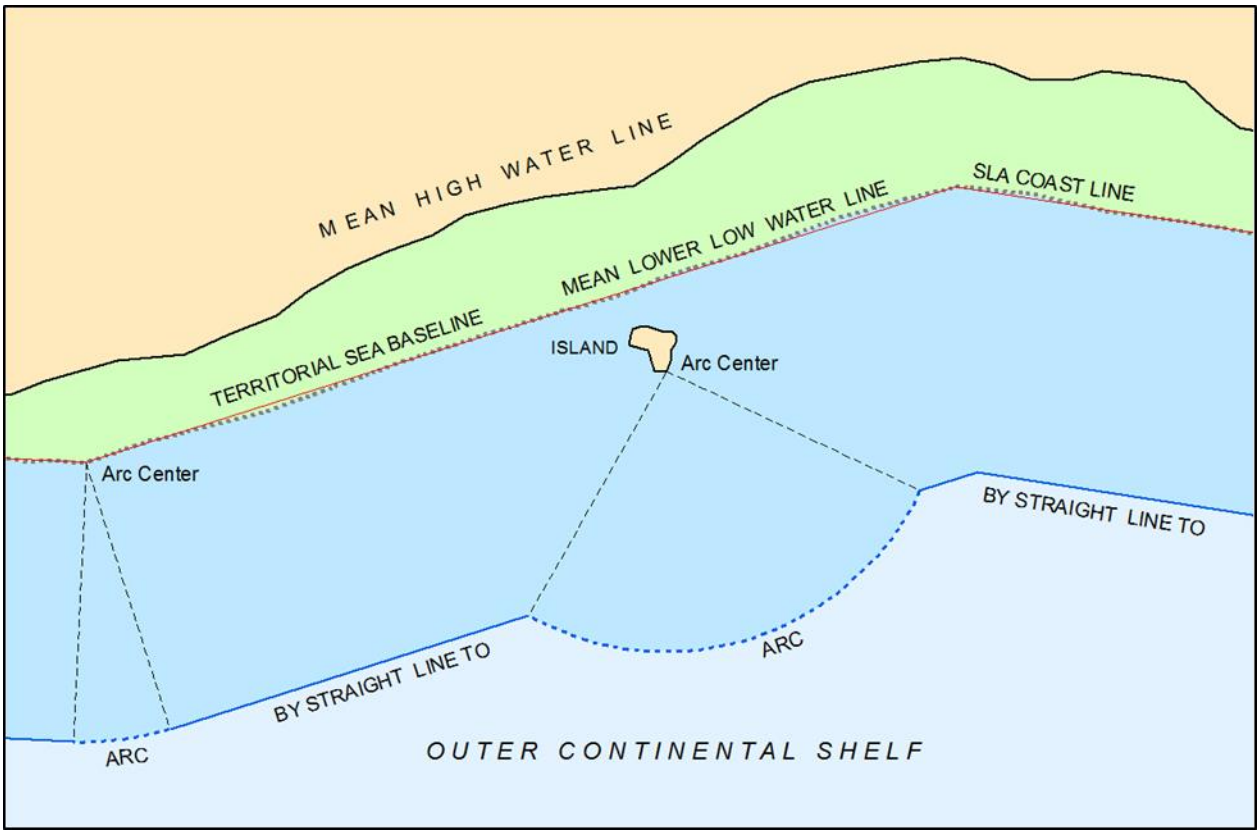

Figure 6: Illustration of the Boundary Description used in the Fifth Supplemental Decree.

The Practice of "Fixing" the SLA Boundary

As mentioned above, the 1986 amendment to the SLA allowed for SLA boundaries to be fixed by way of a final decree from the Supreme Court. 43 U.S.C. §1301(b).

Prior to the Fifth Supplemental Decree, the Supreme Court had previously entered other decrees that fixed/established the SLA boundary by specifying the coordinates of the federal-state boundary or the coast line from which the SLA grant is measured. See *United States* v. *Alaska*, 530 U.S. 1021 (2000) (fixing shared boundaries in the Chukchi and Beaufort Seas); *United States* v. *Louisiana* (Texas Boundary Case), 525 U.S. 1(1999); *United States* v. *Louisiana* (Alabama and Mississippi Boundary Case), 507 U.S. 7 (1993) (Alabama coast line); *Mississippi* v. *United States*, 498 U.S. 16 (1990) (stipulated baseline in the vicinity of Chandeleur Sound); *United States* v. *Louisiana* (Alabama and Mississippi Boundary Case), 498 U.S. 9 (1990) (Mississippi coast line in the vicinity of Mississippi Sound); *United States* v. *Louisiana* (Louisiana Boundary Case) 452 U.S. 726 (1981) (United States-Louisiana boundary); and *United States* v. *Louisiana* (Louisiana Boundary Case), 422 U.S. 13 (1975) (Louisiana coast line).

With the issuance of the Fifth Supplemental Decree, California's SLA boundary was permanently fixed and is no longer ambulatory and dependent on its coast line.

Conclusion:

It is next to impossible to discriminate millimeters on the OCS. Measuring on a planar representation of an ellipsoid model of the earth is not a precise science**.** Thankfully, the SLA allows for the SLA boundary to be fixed by a final decree of the United States Supreme Court. As part of that process, the U.S. and the State of California collaborated in the research and evaluation of the most appropriate base point source documents available and agreed to their use for fixing the SLA boundary by way of the Fifth Supplemental Decree. The process by which California's SLA boundary was fixed is in compliance with relevant Supreme Court decisions, international treaties, and applicable guidance.