Statutory Forfeiture and the U.S. Space Resource Exploration and Utilization Act of 2015

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Abstract

The United States Space Resource Exploration and Utilization Act of 2015 ("Space Resource Act") specifically allows a U.S. citizen engaged in the commercial recovery of any asteroid resource or space resource to "possess, own, transport, use and sell the asteroid resource or space resource obtained in accordance with applicable law, including the international obligations of the United States." The Space Resource Act is silent regarding the disposition of any asteroid resource or space resource possessed, owned or used by a U.S. citizen in violation of the applicable law.

The United States possesses the sovereign power to take title to private property without the owner's consent. Such a taking is generally undertaken pursuant to the eminent domain power or police power. When the United States exercises its police power to take private property, the taking is not for a public purpose and the Fifth Amendment's requirement for just compensation is inapplicable. A governmental taking of private property pursuant to the police power needs only comport with the Fifth Amendment's due process requirement. Due process is usually satisfied by compliance with the statutory procedures governing forfeiture of the targeted private property.

The United States has employed its police power to obtain forfeiture of Moon rocks collected during NASA's Apollo missions from private persons who possessed or claimed ownership of such items in contravention of law. This suggests the United States may utilize its police power to pursue forfeiture of any asteroid resource or space resource obtained by a citizen in contravention of the Space Resource Act. The United States exercise of its police power may be appropriate in certain situations given the obligations imposed by Outer Space Treaty Article VI which, among other things, mandates State responsibility for non-governmental national activity.

This paper will examine the potential circumstances and procedures by which the United States may seek forfeiture of an asteroid resource or space resource extracted or otherwise obtained by a United States citizen in violation of the Space Resource Act. It will also explore potential defenses to any such forfeiture action such as Article II of the Outer Space Treaty which prohibits the national appropriation of outer space and celestial bodies by any means. The paper will conclude with an analysis of whether new

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laws are necessary to remedy a United States citizen's unlawful possession, ownership or use of an asteroid resource or space resource.

I. Introduction

Title IV of the U.S. Commercial Space Launch Competitiveness Act, codified at 51 U.S.C. §§ 51301-51303, is known as the Space Resource Exploration and Utilization Act of 2015 ("Space Resource Act"). Pursuant to the Space Resource Act, United States citizens are authorized to engage in the commercial extraction of space and asteroid resources.[1] A space resource is defined as an "abiotic resource in situ in outer space" which includes but is not limited to water and minerals while an asteroid resource is "a space resource found on or within a single asteroid."[2] With respect to extracting such resources, the Space Resource Act, in relevant part, reads as follows:

> "[a] United States citizen engaged in commercial recovery of an asteroid resource or a space resource under this chapter shall be entitled to any asteroid resource or space resource obtained, including to possess, own, transport, use, and sell the asteroid resource or space resource obtained in accordance with applicable law, including the international obligations of the United States."[3] [footnote added].

The United States international obligations include complying with Article VI of the Outer Space Treaty[4] which mandates that a State police its nationals outer space activities. Article VI provides, in relevant part, that "[t]he activities of non-governmental entities in outer space, including the Moon and other celestial bodies, shall require authorization and continuing supervision by the appropriate State Party." The Space Resource Act expressly acknowledges this policing obligation.

The Space Resource Act has the dual purpose of facilitating United States citizens engaging in the commercial exploration and commercial recovery of space resources and discouraging the erection of "governmental barriers" which impede developing "economically viable, safe, and stable industries for commercial exploration and commercial recovery of space resources" by United States citizens. 51 U.S.C. § 51302(a)(1)-(2). It also seeks to "promote the right of United States citizens to engage in commercial exploration for and commercial recovery of space resources free from harmful interference, in accordance with the international obligations of the United States and subject to authorization and continuing supervision by the Federal Government." *Id*.,

1 51 U.S.C. § 51303.
2 *Id*., § 51301(1)&(2).
3 *Id*., § 51303.
4 The Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies entered into Force Oct. 10, 1967, 18 UST 2410; TIAS 6347; 610 UNTS 205; 6 ILM 386 (1967).

§ 51302(a)(3)(emphasis added). Thus, the Space Resource Act recognizes the United States obligation to supervise or police its nationals' extraction of space resources and ensure the extractions are performed in accordance with the applicable law.[5] For purposes of the Space Resources Act, a United States citizen is (1) a natural person who is a United States citizen, (2) any entity organized or existing under the laws of the United States or a State; or (3) an entity organized or existing under the laws of a foreign country if the controlling interest is held by a natural person who is a United States citizen or any entity organized and existing under laws of the United States or a State. Id., § § 50902(1) & 51301(3).

Although the Space Resource Act recognizes the international obligation of continuing supervision, the legislation is silent regarding how the United States will exercise this supervision or police power in event a citizen extracts a space or asteroid resource in violation of the applicable law. This paper will explore civil statutory forfeiture under 19 U.S.C. § 1595(a) as one potential governmental recourse in exercising its police power over space or asteroid resource extractions which are not in compliance with the applicable law. Indeed, a citizens entitlement to "possess, own, transport, use, and sell" a space or asteroid resource is limited to a commercial extraction conducted in compliance with the applicable law. This plain language suggests that a breach of this criteria nullifies a citizen's entitlement to exercise dominion and control of the space or asteroid resource. Thus, forfeiture presents a viable recourse as it prohibits the actor from profiting or otherwise deriving the statutory benefits from an unlawful or noncompliant extraction.[6]

A discussion of the applicable laws will not be a facet of this examination as that is a topic sufficient for a separate paper. Accordingly, this paper will start from the premise that a United States citizen failed to comply with an applicable substantive or procedural provision of United States or international law governing the extraction of a space or asteroid resource. The analysis will entail a consideration of Outer Space Treaty Article II which prohibits the national appropriation of outer space and celestial bodies by any means as well as the necessity for the enactment of any new laws to enhance the forfeiture remedy.

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5 To ensure compliance with this obligation, the Space Resource Act directs the President to submit a report to Congress specifying "(1) the authorities necessary to meet the international obligations of the United States, including authorization and continuing supervision by the Federal Government; and (2) recommendations for the allocation of responsibilities among Federal agencies for the activities described in paragraph (1)."

6 United States federal law recognizes the equitable principle that "'[n]o person should be permitted to profit from his own wrong.'" *Metropolitan Life Insurance Co. v. Little*, 2013 WL 4495684, at *3 (E.D.N.Y. 2013) quoting *Prudential Insurance Company of America v. Tull*, 690 F.2d 848, 849 (4th Cir.1982).

II. Police Power and Forfeiture under 15 U.S.C. 1595a

The United States possesses the sovereign power to take property, real or personal, or any item amounting to a property right, without consent of the person having ownership or possessory rights. Such a taking is generally undertaken pursuant to the eminent domain power or police power. An eminent domain taking occurs when the government takes private property for a public purpose and the Fifth Amendment to the United States Constitution mandates payment of just compensation for the taking. When the United States exercises its police power to take private property, the taking is not for a public purpose and the Fifth Amendment's requirement for just compensation is inapplicable. A governmental taking of private property pursuant to the police power needs only comport with the Fifth Amendment's due process requirement which is usually satisfied by complying with the statutory procedures governing forfeiture of the targeted private property.

There are three basic forfeiture actions under United States law which are criminal forfeiture, civil judicial forfeiture and administrative forfeiture.[7] Regardless of the type of forfeiture proceeding, they all manifest two underlying core principles which are (1) separating the wrongdoer from the property or proceeds and (2) vesting title in the United States or returning it to its rightful place.[8] While forfeiture statutes target specific conduct which is not readily translated to the outer space context,[9] the forfeiture statute in the Tariff Act of 1930, codified at 19 U.S.C. § 1595a, is sufficiently generic and flexible for seeking forfeiture of space or asteroid resources extracted in violation of the applicable law.

19 U.S.C. § 1595a is a customs statute which allows for the forfeiture of a range of merchandise "which is introduced or attempted to be introduced into the United States contrary to law..." *Id*., § 1595a(c). Although the statute is a customs statute, it apparently extends to property introduced or attempted to be introduced into the United States regardless of whether it violates customs law.[10] *United States v. Davis* recognized this broad application by rejecting the defendant's contention that the phrase "contrary to law" meant "contrary to

7 Kyle Brennan, *Civil Forfeiture, Customs Law and the Recovery of Culture Property*, 25 DePaul Journal of Art, Technology & Intellectual Property Law, 337-338 (2015). Criminal forfeiture is an action brought as a part of the criminal prosecution of a defendant and is an in personam action which requires that the government indict the property used or derived from the crime along with the defendant. There are various criminal offenses which authorize forfeiture of property. Civil forfeiture is an in rem proceeding in which a judicial action is commenced against the property as opposed to a person. Lastly, an administrative forfeiture is an in rem proceeding in which a federal agency is permitted to forfeit property without instituting a judicial case. *Id*.

8 *Id*., at 337.

9 *Id*.

10 *United States v. Davis*, 648 F.3d 84, 89 (2d Cir. 2011).

customs law" and accepting the United States interpretation of the phrase based on the statute's plain language. *Davis* noted that:

> "[t]he government argues, with some force, for a literal interpretation of the statute. If Congress had intended to limit the scope of Section 1595a to violations of the customs laws, it could have said so. Since it did not, Section 1595a(c) would appear to require only that the property in question be introduced into the United States illegally, unlawfully, or in a manner conflicting with established law."[11]

While *Davis* declined to hold that the statute applied to any and all property being introduced into the United States outside of the scope and reach of the customs law, it did expressly rule that a § 1595a forfeiture could be premised on a non-customs statute since that was all that was necessary to resolve the case.[12] *Davis*, therefore, leaves the door open for violations of other non-customs statutes serving as a basis for a § 1595a forfeiture.

Not only does Section 1595a have a reach beyond the customs laws, but a trio of reasons make it is also a unique and powerful civil asset forfeiture tool for a trio of reasons. First, unlike other forfeiture statutes, § 1595a is not subject to the heightened preponderance-of-the evidence standard as the government needs only show probable cause in order to justify a seizure and forfeiture.[13] Upon showing probable cause, the burden shifts to the person or entity claiming an interest in the property to rebut the probable cause showing.[14] The statute does not establish the evidentiary standard a claimant must meet but *United States v. One Lucite Ball Containing Lunar Material* holds that the claimant must rebut the probable cause showing by a preponderance of the evidence.[15] Secondly, § 1595a does not allow the innocent-owner defense.[16] Thirdly, scienter or intent may not be a requirement for all § 1595a(c)'s violations.[17]

Thus, to seize and meet its burden to forfeit property under § 1595a the United States need only show probable cause that merchandise was introduced into the United States contrary to law pursuant to one of the 13 bases enumerated in the statute. At this juncture, it is necessary to examine whether § 1595a's forfeiture scheme can be reasonably applied to space and asteroid resources extracted contrary to the Space Resource Act.

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11 *Id.*

12 *Id.*, at 90. The Court explained that it need not decide the government's argument that the violation of any statutory scheme satisfies § 1595a's "contrary to law" requirement as the non-custom law at issue satisfied that criteria and since that particular law "is the only law the government has alleged as a basis for its invocation of Section 1595a, that is the only question we need answer here." *Id.*

13 *Brennan, supra* note 7, at 339-340; *Davis*, 648 F.3d at 95.

14 19 U.S.C. § 1617.

15 252 F. Supp. 2d 1367, 1379 (S.D. Fla.2003).

16 *Brennan, supra* note 7, at 339; *Davis*, 648 F.3d at 90-95.

17 Brennan, *supra* note 7, at 362-368. *See United States v. A Painting Called Hannibal*, 2013 WL 1890220 at *3-*4 (S.D.N.Y. 2013.

III. Section 1595 Forfeiture and the Space Resources Act

Evaluating whether forfeiture under § 1595a is appropriately applied to space or asteroid resources necessitate analyzing the statute's principal elements in context of outer space. The elements requiring examination are (1) merchandise (2) introduced into the United States (3) contrary to law and (4) the specific statutory grounds for forfeiture identified in § 1595a(c). Each of these elements will be evaluated below in the context of extracting resources in outer space.

A. The Merchandise Element

For purposes of § 1595(a) the term "merchandise" means goods, wares, and chattels of every description, and includes merchandise the importation of which is prohibited, and monetary instruments as defined in 31 U.S.C. § 5312.[18] This broad definition of "merchandise" should be sufficient to encompass space and asteroid resources.

The Space Resource Act does not explicitly refer to space or asteroid resources as property. However, since it allows United States citizens to "possess, own, transport, use, and sell" space or asteroid resources this strongly indicates that the resources are chattel given that undefined words in § 1595a are interpreted in accordance with their plain and ordinary meaning.[19]

There are two types of chattel namely personal chattel and real chattel.[20] Real Chattel refers to "a real-property interest that is less than a freehold or fee, such as a leasehold."[21] Personal chattel, on the other hand, consists of tangible goods and intangible rights.[22] A tangible good means "moveable or transferrable property,"[23] whereas an intangible right is a right similar to a patent[24] and a license.[25]Since the term "merchandise" includes chattels of every description, it is immaterial if space or asteroid resources constitute a physical and moveable property or some form of intangible right as, in either case, the resources can reasonably be construed as chattel for § 1595a purposes.

This conclusion is supported by *United States v. One Lucite Ball Containing*

18 19 U.S.C. § 1401(c).

19 *United States v. Lehman*, 225 F.3d 426, 428 (4th Cir. 2000)[Construing an undefined term in § 1595a in accordance with its ordinary, contemporary, common meaning].

20 *Lyden v. Nike Inc.*, 2013 WL 5729727, at *5 (D. Or. 2013) citing *Black's Law Dictionary* 268 (9th ed.2009).

21 *Winters v. Jordan*, CV©00522, 2010 WL 3633038, at *8 n. 9 (E.D. Cal. July 22, 2010) quoting *Black's Law Dictionary* at 229 (7th ed.1999), report and recommendation adopted, 2010 WL 3636232 (E.D. Cal. 2010), aff'd, 479 Fed. Appx. 742 (9th Cir. 2012)(unpublished).

22 *Nike Inc.*, 2013 WL 5729727, at *5 citing *Black's Law Dictionary* 268 (9th ed.2009).

23 *Isham v. Padi Worldwide Corp.*, 2007 WL 2460776, at *11 (D. Haw. Aug. 23, 2007) quoting *Black's Law Dictionary* 95 (2d ed.2001).

24 *Id.*; *Nike Inc.*, 2013 WL 5729727, at *5.

25 *Joe Hand Promotions, Inc. v. Jacobson*, 874 F. Supp. 2d 1010, 1019 (D. Or. 2012).

Lunar Material,[26] which concerned the § 1595a forfeiture of lunar material returned to Earth by an Apollo Moon. The Court concluded that the lunar material, a Moon rock, constituted property and was merchandise for § 1595(a) purposes.[27] Since the lunar material at issue in *One Lucite Ball* fits squarely within the definition of space resource,[28] judicial precedence exists which recognizes a space resource as "merchandise" subject to forfeiture under § 1595a.

B. Introduced into the United States

The element of being introduced into the United States actually consists of two criteria which must be satisfied in connection with an extracted space or asteroid resource. The first is what constitutes the United States with the second being how is the merchandise, i.e., space or asteroid resource, introduced into the United States. Each of these criteria will be examined separately.

The term United States for purposes of § 1595a "includes all Territories and possessions of the United States except the Virgin Islands, American Samoa, Wake Island, Midway Islands, Kingman Reef, Johnston Island, and the island of Guam."[29] So, for a § 1595a forfeiture to have viability under the Space Resource Act, a space object used to extract a space or asteroid resource must be considered to United States territory or a possession of the United States.

Under maritime law, "the law of the flag doctrine traditionally states that a 'merchant ship is part of the territory of the country whose flag she flies, and that actions aboard that ship are subject to the laws of the flag state.'"[30] The issue thus becomes whether the same or similar principle applies to space objects.

Pursuant to Outer Space Treaty Article VIII, the United States possesses jurisdiction and control over a space object registered to the United States while the object is in outer space or on a celestial body. However, having jurisdiction and control over a space object is not necessarily equivalent to the space object being United States territory or a United States possession. Nevertheless, for patent law purposes, the United States Congress has enacted legislation which recognizes a space object registered to the United States as United States territory.[31] While there is some disagreement whether such legislation extends the maritime law of the flag doctrine to space objects registered to the United

26 252 F.Supp.2d 1367 (S.D. Fla. 2003).
27 *Id*., at 1374-1378.
28 See 51 U.S.C. § 51303.
29 19 U.S.C. § 1401(h).
30 *United States v. Kun Yun Jho*, 534 F.3d 398, 405 (5th Cir.2008) citing Cunard S.S. Co. v. Mellon, 262 U.S. 100, 123, 43 S.Ct. 504, 67 L.Ed. 894 (1923).
31 35 U.S.C. § 105.

States,[32] one U.S. federal court has ruled that the legislative history of the patent statute suggests that the statute reflected an extension of the maritime law of the flag territory rule to registered space objects.[33]

In addition to patent law, space objects registered pursuant to the United States pursuant to the Outer Space Treaty and the Registration Convention[34] are deemed to be United States territory for criminal law purposes.[35] The criminal code defines the United States territorial jurisdiction as including:

> "[a]ny vehicle used or designed for flight or navigation in space and on the registry of the United States pursuant to the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies and the Convention on Registration of Objects Launched into Outer Space, while that vehicle is in flight, which is from the moment when all external doors are closed on Earth following embarkation until the moment when one such door is opened on Earth for disembarkation or in the case of a forced landing, until the competent authorities take over the responsibility for the vehicle and for persons and property aboard."[36]

Territorial jurisdiction is the bedrock of modern international law[37] as it is premised on a State possessing sovereignty over its territory which includes acts occurring within the territory and acts occurring outside of the territory but having an effect within the territory.[38]

Based on the analogy to maritime law and the provisions of patent law and the criminal code, the basis exists for contending that a space object registered to the United States under the Outer Space Treaty and Registration Convention is United States territory under § 1595a purposes. This then leads to examine when and under circumstances a space or asteroid resource is "introduced into the United States."

Since § 1595a nor any other provision of the Tariff Act of 1930 defines the term "introduced," *United States v. Lehmann,*[39] determined that the word had its ordinary meaning of "'to lead, bring, conduct, or usher in esp. for the first

32 *M-I Drilling Fluids UK Ltd. v. Dynamic Air Inc.*, 99 F. Supp. 3d 969, 975 (D. Minn. 2015).
33 *Id.*
34 Convention on Registration of Objects Launched into Outer Space entered into Force Sept. 15, 1976, 28 UST 695; TIAS 8480; 1023 UNTS 15; 14 ILM 43 (1975).
35 18 U.S.C. § 7(6).
36 *Id.*
37 Kelly A. Gable, *Cyber-Apocalypse Now: Securing the Internet Against Cyberterrorism and Using Universal Jurisdiction As A Deterrent*, 43 Vanderbilt Journal of Transnational Law 57, 100 (2010); Harold G. Maier, *The Authoritative Sources of Customary International Law in the United States*, 10 Michigan Journal of International Law 450, 456 (1989).
38 *United States v. Ali*, 885 F.Supp.2d 17, 25-26 rev. in part on other grounds 885 F.Supp.2d 55 (D.D.C. 2012).
39 *United States v. Lehman*, 225 F.3d 426 (4th Cir. 2000).

time ... [or] to put or insert into.'"[40] Although it is contended that § 1595a requires a nexus to international commerce,[41] it does not require that merchandise enter the stream of commerce before it is deemed to have entered the United States.[42] So, the plain meaning of the word "introduced" indicates that the act of loading a space resource onto a space object registered to the United States constitutes the space resource being introduced into the United States.

C. Contrary to Law

Neither § 1595a nor any other provision of the Tariff Act of 1930 defines the phrase "contrary to law" which means it has the ordinary and plain broad meaning of an act that is "'illegal; unlawful; conflicting with established law.'"[43] Moreover, as previously discussed the lack of a definition also implies that the statute is not limited to an act which only violates customs law.[44] The Space Resource Act requires that a United States citizen can extract a space resource as part of a commercial operation in compliance with all applicable law. Accordingly, a United States citizen extracting a space or asteroid resource for a non-commercial purpose or contrary to its licensing terms or any other applicable law then the extraction and loading onto a United States registered space object would be contrary to law. At this point, it should be noted that the phrase "contrary to law" is not limited to United States law which leads to the unresolved dispute of whether the phrase also encompasses foreign law.[45] In any event, since the Space Resource Act requires compliance with the United States international obligations,[46] the phrase should include the applicable provisions of the space treaties to which the United States is a signatory.

D. The Statutory Grounds for Forfeiture

Section 1595a(c) allows forfeiture of merchandise introduced into the United States contrary to law under 13 different circumstances. Of the 13 circumstances, two seem applicable to the scenario involving a space or asteroid resource. Forfeiture is allowed for merchandise which is stolen, smuggled or clandestinely imported or introduced[47] as well as merchandise which is for which the "importation or entry requires a license, permit, or other authorization or an agency of the United States Government and the

40 *Id*., at 428-429 quoting *Webster's Third New International Dictionary* 1186 (3d. ed.1986).
41 *Davis*, 648 F.3d at 90.
42 *Lehman*, 225 F.3d at 429.
43 *Davis*, 648 F.3d at 89 quoting *Black's Law Dictionary* 377 (9th ed. 2009).
44 *Supra* at 2.
45 Brennan, *supra* note 7, at 370-375.
46 51 U.S.C. § 51303.
47 19 U.S.C. § 1595a(c)(1)(A).

merchandise is not accompanied by such license, permit, or authorization."[48] The latter provision does not require that the license, permit or other authorization physically accompany the merchandise. Rather the law only requires that the owner or the person entitled to possession produces the appropriate license, permit or authorization when needed or requested.[49] Either of the two basis could reasonably support a forfeiture of a space or asteroid resource extracted in contravention of the Space Resource Act.

IV. The Lawfulness of a Space or Asteroid Resource Being Forfeited to the United States

A reasonable basis exists for contending that a § 1595a forfeiture proceeding could be applied in connection with a space or asteroid resource. However, Outer Space Treaty Article II can be viewed as imposing a legal hurdle to utilizing such a forfeiture since he Space resource Act requires compliance with the United States international obligations. Article II provides that "[o]uter space including the moon and other celestial bodies, is not subject to national appropriation by claim of sovereignty, by means of use or occupation, or by any other means." It is contended by some that Article II precludes the United State or any other country from holding title to a space or asteroid resource. Contrary to that interpretation of Article II, a valid argument exists that customary international law supports the United States being able to own and hold title to a space or asteroid resource.

Customary international law is not stagnant but evolves over time.[50] It forms by State practice but does not derive from "any single, definitive, readily-identifiable source."[51] It has historically been viewed as coming into existence over an extended period of time and derives from a consensus among States regarding norms that govern state conduct.[52] State conduct alone, however, is insufficient. The state conduct or practice must be founded on a sense of legal obligation, meaning that states conform with the practice in their dealings with each other because they consider it a legal requirement as opposed to it being "a good idea, or politically useful or otherwise desirable."[53] The conduct or practice does not have to be universal but it "should reflect wide acceptance among the states particularly involved in the relevant activity."[54]

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48 *Id.*, § 1595a(c)(2)(B).

49 *See Aircraft (One (1) Douglas AD-4N Skyraider Aircraft*, 839 F. Supp. 2d at 1250 n. 10; *United States v. 863 Iranian Carpets*, 981 F. Supp. 746, 747-748 (N.D.N.Y. 1997).

50 *Pope & Talbot Inc. v. Canada, NAFTA Arbitration Tribunal,* 125 ILR 127, 148 § 59.

51 *United States v. Bellaizac-Hurtado*, 700 F.3d 1245, 1252 (11th Cir. 2012) citing and quoting *Flores v. S. Peru Copper Corp*., 414 F.3d 233, 247-249 (2d Cir. 2003).

52 *Id.*

53 *Id.* quoting *Buell v. Mitchell*, 274 F.3d 337, 372 (6th Cir. 2001); Restatement (Third) of Foreign Relations.

54 *Id.*

Pragmatic scholars, however, confront this traditionalist school of thought with the doctrine of "instant custom."[55] Proponents of the "instant custom" school of thought believe that characteristics of the modern era such as the exponential expansion of technology, instantaneous flow of information and acceleration of change in the geopolitical landscape renders the traditional deliberative process too slow and archaic.[56] The "instant custom" theory allows for a rapid development of customary law based on "(1) an articulation of the putative law and (2) an act in support of it or acquiescence demonstrating acceptance of it."[57] Support or acquiescence can occur over a short period of time to demonstrate that a norm has developed and does not require the numerosity of States as the traditional method.[58] The fundamental divergence between traditional formation of international law and "instant custom," however, is the temporal element. It can fairly be argued that the treatment of space resource in the form of lunar material satisfies both beliefs.

Commencing in 1969 and ending in 1972 the United States conducted six (6) crewed missions to the moon which garnered 382 kilograms or 842 pounds lunar material consisting of lunar rocks, core samples, pebbles, sand and dust from the lunar surface.[59] The United States maintains that it owns all lunar material collected during the six Apollo missions in which it has not transferred titled.[60] Similarly, uncrewed lunar missions conducted by the Soviet Union collected about three-quarters of a pound of lunar material over which it exercised ownership and control.[61] In addition to the United States and Russia, Japan has also retrieved and exercised dominion, control,

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55 Jacob M. Harper, "*Technology, Politics, And The New Space Race: The Legality And Desirability Of Bush's National Space Policy Under The Public And Customary International Laws Of Space*," 8 Chicago Journal of International Law 681, 688-690 (Winter 2008). *See* Bin Cheng, *United Nations Resolutions on Outer Space: "Instant" International Customary Law?*, 5 Indian J. International Law 23, 35-40, 45-48 (1965).

56 *See* Harper, *supra* note 37, 8 Chi. J. Int'l L. at 690.

57 *Id.* at 690-691.

58 *Id.* at 691.

59 Lunar Rocks and Soils from Apollo Missions available at https://curator.jsc.nasa.gov/lunar/ (Sept. 1, 2016) (Lasted visited on September 6, 2017). The lunar material was collected in 2200 separate samples from six different exploration sites on the moon. *Id.*

60 Stephen DiMaria, *Starships and Enterprise: Private Spaceflight Companies' Property Rights and the U.S. Commercial Space Launch Competitiveness Act,* 90 St. John's Law Review 415, 426-427 (2016); Thomas J. Herron, *Deep Space Thinking: What Elon Musk's Idea to Nuke Mars Teaches Us About Regulating the "Visionaries and Daredevils"* of Outer Space, 41 Columbia Journal of Environmental Law 553, 594 n. 277 (2016). *See Davis v. United States*, 2014 WL 12696368 at *6 (C.D. Cal. 2014) reversed on other grounds, 854 F.3d 594 (9th Cir. 2017).

61 Kelly M. Zullo, *The Need to Clarify the Status of Property Rights in International Space Law*, 90 Georgetown Law Journal 2413, 2432 (2002).

and ownership over lunar material.[62] At no time during the three decades that have elapsed since lunar material was first extracted from the moon and brought to Earth, has any State challenged the United States, Soviet Union or Japan's appropriation of and exercise of ownership rights over extracted lunar material.[63]

Even more so, the United States has transferred title to portions of lunar material it extracted by presenting a sample of the lunar material as a goodwill gift to at least 135 countries.[64] There is no known instance in which a country rejected the gift or claimed that neither it nor the United States could hold title to the lunar resource. Similarly, whenever the issue of ownership over lunar material has arisen in the United States judiciary, the courts have never ruled that the United States could not own or hold title to the lunar resources[65] or that title could not be transferred to another country[66] or an individual.[67] But then again, it appears that Outer Space Treaty Article 2 was neither raised nor litigated in the cases.[68] Again, no country has formally protested any such judicial rulings. It also appears that the United Nations has not formally protested or voiced any objection to how member States have treated resources extracted from the lunar surface.

Given State behavior involving extracted lunar material over the last 45 to fifty years, it can reasonably be concluded that the States actively "involved in the relevant activity" have acted and continue to act based on a sense of legal understanding concerning their rights under the Outer Space Treaty.[69] Thus, the State behavior of exercising dominion and control and ownership rights over extracted lunar resources can be viewed as fulfilling the criteria for "instant custom" as they articulate legal rights and sufficient State conduct demonstrates acceptance of the legal right.[70] The legal principles and the prevailing State practice can also be deemed to satisfy the legal obligation and *opinio juris* element under the traditional method of forming international law.

The crux for the traditional method, therefore, is whether sufficient time has lapsed for the State practice to be considered an international norm. The temporal period for showing the existence of an international norm is not subject to an enshrined number of years. Instead, as the International Court of

62 H.R. Rep. No. 114-153, at 8-9 (2015); Herron, *supra* note 59 at 594 n. 277.
63 H.R. Rep. No. 114-153, at 8-9; *Kelly, supra* note 60 at 2432.
64 Robert Z. Pearlman, *NASA Bust's Woman Selling $ 1.7 Million Moon Rock*, space.com (May 26, 2011) available at https://www.space.com/11804-nasa-moon-rock-sting-apollo17.html (Last visited September 6, 2017).
65 *One Lucite Ball*, *supra*; *Davis*, 2014 WL 12696368.
66 *One Lucite Ball, supra*.
67 *See United States v. Ary*, 224 F.Supp.3d 1186 (D. Kan. 2016).
68 *See Ary*, *supra*; *One Lucite Ball*, *supra*; *Davis*, 2014 WL 12696368
69 *See Bellaizac-Hurtado*, 700 F.3d at 1252 citing and quoting *Buell,* 274 F.3d at 372.
70 Harper, *supra* note 37, 8 Chi. J. Int'l L. at 688.

Justice observed in *North Sea Continental Shelf (Germany v. Denmark, Germany v. Netherlands):*[71]

> "[a]s regards the time element, although it was over ten years since the Convention had been signed, it was still less than five years since it came into force, and less than one had elapsed when the negotiations between the Federal Republic and Denmark and the Netherlands had broken down. Although the passage of only a short period of time was not necessarily, or of itself, a bar to the formation of a new rule of customary international law, an indispensable requirement would be that, within the period in question, State practice, including that of States whose interests were specially affected, should have been both extensive and virtually uniform, and should moreover have occurred in such a way as to show a general recognition that a rule of law or legal obligation was involved."[72]

The conduct of space faring States over the fifty years since the first extraction of resources from the lunar surface can constitute a sufficient basis for deciding that a State can own, possess and exercise dominion and control over a space resource as defined in the Space Resource Act. Accordingly, a concrete foundation supports a determination that the United States can lawfully obtain title to a space or asteroid resource pursuant to a § 1595a forfeiture.

V. Necessity of New Law

Enacting a forfeiture procedure within the Space Resource Act would be ideal in as much as it can be tailored for the uniqueness attributable to space based activities. Nevertheless, to eliminate potential challenges to a § 1595a forfeiture of a space or asteroid resource, the statutory scheme can be enhanced by modifying the definition of the United States to clearly reflect that a registered space object registered to the United States is deemed to be a part of the United States. This can best be achieved by 19 U.S.C. § 1401(h) incorporating the language employed in the defining the territorial jurisdiction in the United States criminal code.[73] Doing so will cause the statutory definition of United States for a § 1595a forfeiture to read as follows;

> "[t]he term "United States" includes all Territories and possessions of the United States except the Virgin Islands, American Samoa, Wake Island, Midway Islands, Kingman Reef, Johnston Island, and the island of Guam but does include any vehicle used or designed for flight or navigation in space and on the registry of the United States pursuant to any international treaty to which the United States is a party from the moment when all external doors are closed on Earth following embarkation until the moment the vehicle returns to a geographical location on Earth which is subject to United States territorial jurisdiction and is taken over by the competent United States authorities responsible for the vehicle."

71 1969 I.C.J. 3; 41 ILR 29 (1969).
72 *Id* at 1969 I.C.J. at 74, 41 ILR at 72.
73 See 18 U.S.C. § 7(6).

This modified definition would strengthen the weakest link in utilizing a § 1595a forfeiture as a part of the United States obligation to police or supervise its citizens extraction of a space or asteroid resource.

VI. Conclusion

The Space Resource Act commits the United States to supervise the commercial extraction of space or asteroid resources as required by Outer Space Treaty Article VI. This police activity should entail having a means to redress an extraction which fails to conform with the applicable law, which includes the United States international obligations. The forfeiture provision of the Tariff Act of 1930, 19 U.S.C. § 1595a presents a basis for civil enforcement of the Space Resources Act within the context of current law. Although the statute is not a perfect fit, it can reasonably be employed to a space or asteroid resource given the statute's broad scope and lax burden. While the United States ability to hold title to a space or asteroid resource pursuant to the forfeiture procedure may be viewed by some as being very problematic, State practice and decisions of the United States judiciary suggest otherwise.