

ICSID Case No. ARB/19/1

Administered by the
INTERNATIONAL CENTRE FOR SETTLEMENT OF INVESTMENT DISPUTES

LEGACY VULCAN, LLC

Claimant

v.

UNITED MEXICAN STATES

Respondent

CLAIMANT'S MEMORIAL

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I. INTRODUCTION AND SUMMARY

1. This dispute concerns Mexico's violation of its international obligations under the North American Free Trade Agreement ("NAFTA").¹

2. Claimant Legacy Vulcan, LLC ("Legacy Vulcan") is a U.S. company dedicated to the production and supply of construction aggregates and materials used to build infrastructure, including buildings, homes, factories, roads, and airports.

3. In the 1980s, encouraged by Mexico's policies to attract foreign investment in non-oil sectors, Legacy Vulcan started investing in Mexico. It developed a one-of-a-kind project to quarry limestone and produce high-quality aggregates in the State of Quintana Roo for export to the United States. Legacy Vulcan's investment in Mexico is a vertically-integrated operation designed to produce millions of tons of aggregates over many decades for sale in markets along the Gulf Coast and Atlantic seaboard of the United States. Because there are few or no indigenous limestone deposits in those markets, high-quality aggregates command a premium price there.

4. Legacy Vulcan's investment in Mexico is anchored in a unique area south of Playa del Carmen rich in high-quality limestone deposits in close proximity to the sea. Through its main Mexican subsidiary, Calizas Industriales del Carmen, S.A. de C.V. ("CALICA"), Legacy Vulcan acquired four lots of land in that area: Punta Venado, strategically located by the sea; and La Rosita, El Corchalito, and La Adelita, which are next to Punta Venado and rich in limestone deposits for quarrying. CALICA built a state-of-the-art plant in La Rosita to process the quarried stone and an automated system to transport the resulting aggregates to Punta Venado. There, CALICA dredged the only deep-water port in Quintana Roo. It also built a terminal where the aggregates are loaded onto a fleet of Legacy Vulcan vessels for shipping to Legacy Vulcan's distribution yards in the United States. In this Memorial, Legacy Vulcan's integrated quarrying, shipping, and distribution network is referred to as the Project or the CALICA Network.

5. Mexico welcomed Legacy Vulcan's investments. In the mid-1980s, Mexico entered into an Investment Agreement with Legacy Vulcan to launch the Project. Mexico also granted all the necessary authorizations to make the Project possible and awarded a long-term concession for CALICA to operate the port. That concession includes a private terminal used for CALICA's operations and a public terminal that — at Mexico's request — CALICA built for ferries and cruise

¹ Mexico Federal Official Gazette, including NAFTA text, p. 1 (20 December 1993, Second Section) (C-0009-ENG).

ships that serve the community. Mexico also issued multi-year environmental authorizations for CALICA to quarry its lots.

6. At the time, extracting high-quality aggregates in Mexico for export to the United States was an untested proposition. Legacy Vulcan's vision and investments proved to be a success. Since the Project began exporting aggregates in the early 1990s, it has enjoyed several decades of highly profitable operations. Through July 2018, Legacy Vulcan has invested more than [REDACTED] (historical value) in the Project. It is the largest employer in the State of Quintana Roo outside of the tourism industry, has contributed millions of dollars in taxes, and has helped to transform what was a collection of small fishing villages into one of the most economically vibrant regions in Mexico's east coast: the Cancún-Tulum corridor.

7. By the late 2000s, however, Mexican government instrumentalities had adopted measures that seemed to chip away at Legacy Vulcan's and CALICA's rights over the Project. In 2007, in contravention of the CALICA port concession, Mexico purported to award the right to charge fees for the use of CALICA's port to the State of Quintana Roo's port authority. And, in 2009, Mexico changed the zoning regime applicable to La Adelita — CALICA's largest untapped lot — to one that did not allow quarrying activities. Even though Mexico assured CALICA that its permits had been grandfathered and were not affected by the zoning change, this modification eventually impeded CALICA from quarrying La Adelita.

8. In 2014, Mexico's federal, state, and municipal governments entered into two interdependent, legally binding agreements with CALICA to address these and related issues. Through these agreements, CALICA gave up valuable rights in the Project, including its concessioned rights over the public port terminal, in exchange for specific commitments by Mexico's instrumentalities to, *inter alia*, amend the zoning regime to make clear that CALICA was allowed to quarry La Adelita. Expecting compliance with these obligations, Legacy Vulcan invested [REDACTED] in the Project.

9. Mexico ultimately reneged on its obligations. Its instrumentalities pledged to update the zoning regime by December 2015 but never did so, effectively blocking CALICA from quarrying La Adelita. Government officials have acknowledged that their failure to do so was unlawful and that they chose to ignore this core commitment of the 2014 agreements based merely on political expediency. CALICA's repeated pleas for compliance yielded a curt response from Quintana Roo's governor: "You are not entering La Adelita — period."

10. In 2018, Mexico also blocked production in El Corchalito, further reducing CALICA's quarrying area and severely restricting the Project's profitability and longevity. This measure was premised on a demonstrably flawed environmental inspection that disregarded Mexican law. To make matters worse, Mexico ignored the final ruling of its own judiciary confirming that the Quintana Roo port authority had unlawfully charged millions of dollars in port fees, which it has refused to reimburse to CALICA. Mexico shut down CALICA's operations in El Corchalito days after government officials threatened to do so as retaliation for CALICA's attempts to recoup those fees.

11. These facts are laid out in detail in Part II, supported by extensive documentary evidence (139 exhibits), as well as the witness declarations of [REDACTED]

[REDACTED]. The facts are further supported by the report on relevant aspects of Mexican law prepared by [REDACTED]

12. As shown in Parts III and IV, this Tribunal has jurisdiction to resolve this dispute under NAFTA and the Convention on Settlement of Investment Disputes between States and Nationals of Other States ("ICSID Convention"), and the claims submitted to arbitration are admissible.

13. As explained in Part V, Mexico's measures breached NAFTA Chapter 11, including its obligation to accord U.S. investors and investments fair and equitable treatment. By blocking production in La Adelita and El Corchalito, Mexico acted arbitrarily, violated due process, and frustrated Legacy Vulcan's legitimate expectations, which were based on specific representations and concrete obligations assumed in the 2014 agreements. By disregarding the final rulings of its own courts, Mexico subverted the rule of law.

14. Mexico's wrongful measures have caused significant losses to Legacy Vulcan, as shown in Part VI. Without the ability to produce aggregates from two of its three quarrying lots, including its largest lot (La Adelita), the Project's profitability and longevity have been substantially curtailed. Under well-established principles of international law, Legacy Vulcan is entitled to full reparation. This measure of damages has been calculated by Darrell Chodorow of The Brattle Group. As detailed in his report, Legacy Vulcan has suffered losses as follows:

Table 1 -



15. For the reasons set forth below, Legacy Vulcan and CALICA respectfully request that the Tribunal uphold the claims asserted herein, declare Mexico in breach of NAFTA, award Claimant [REDACTED] in compensation, including a tax adjustment to avoid double taxation and pre-Award interest as of 30 April 2020, plus post-Award interest and costs.

16. In lieu of monetary compensation, Legacy Vulcan would be prepared to accept reparation in the form of Mexico's prompt unblocking of quarrying operations in La Adelita and El Corchalito, as detailed in the prayer for relief. To make Legacy Vulcan whole, this reparation should also include reimbursement of the illegally-charged port fees and compensation for the losses suffered by Legacy Vulcan until its rights are fully restored.

II. STATEMENT OF FACTS

A. THE CLAIMANT

17. Claimant Legacy Vulcan is a limited liability company organized and existing under the laws of Delaware, United States of America.²

² See Copy of Certification of Formation of Legacy Vulcan, LLC (3 June 2015) (C-0001-ENG); Vulcan Materials Company, Form 10-K for the 2019 fiscal year, pp. 3 (26 February 2020) (C-0023-ENG). At the time Legacy Vulcan started investing in Mexico, the company was called Vulcan Materials Company and was organized under the laws of the State of New Jersey, United States. In 2007, as part of a merger, Vulcan Materials Company was renamed Legacy Vulcan Corp. and became a subsidiary of a newly formed parent company named Vulcan Materials Company that was organized under the laws of the State of New Jersey, United States. In 2015, Legacy Vulcan Corp. was merged into Legacy Vulcan, a limited liability company.

18. Legacy Vulcan is a subsidiary of Vulcan Materials Company (“VMC”), a publicly-traded U.S. company (NYSE: VMC) that is the largest supplier of construction aggregates (primarily crushed stone, sand, and gravel) in the United States and a major producer of aggregates-based construction materials, including asphalt mix and ready-mixed concrete.³

19. VMC’s products are used in virtually all types of construction. They have been used to build homes, schools, hospitals, and factories, for example, as well as infrastructure essential to everyday life, including roads, bridges, ports, airports, and rail networks. With more than 450 aggregates, asphalt, and concrete facilities, VMC serves more than 23,000 customers in 20 states of the United States, plus the District of Columbia, Mexico, and the Bahamas.⁴ VMC and its affiliates employ more than 8,700 people in the United States and more than 400 people in Mexico.⁵ In 2019, VMC’s revenues were approximately US\$5 billion.⁶

20. Legacy Vulcan submitted investment claims to arbitration on its own behalf under NAFTA Article 1116(1) and on behalf of its enterprise, CALICA, under NAFTA Article 1117(1). CALICA is (i) an entity constituted and organized under the laws of Mexico and (ii) indirectly owned and controlled by Legacy Vulcan.⁷ As such, under NAFTA Articles 201 and 1139, CALICA is both an enterprise and an investment of Legacy Vulcan in Mexico.

B. THE RESPONDENT’S POLICIES TO ATTRACT FOREIGN DIRECT INVESTMENT

21. In the early 1980s, faced with a severe economic crisis, Mexico adopted a number of policies to attract foreign direct investment and make the country less dependent on oil exports. In its 1983-1988 National Development Plan, for example, Mexico tied its growth and development to the creation of a robust and sustainable non-oil export sector.⁸ This Plan also

As part of that transaction, Legacy Vulcan has assumed all rights and obligations of Legacy Vulcan Corp. See Witness Statement- [REDACTED] Claimant’s Memorial-ENG, n.1.

³ See Certification of Ownership Structure of Calizas Industriales del Carmen, S.A. de C.V. and Related Mexican Subsidiaries (27 August 2018) (C-0005-ENG).

⁴ Vulcan Materials Company, Form 10-K for the 2019 fiscal year, pp. 3, 7 (26 February 2020) (C-0023-ENG).

⁵ *Id.*, p. 14 (C-0023-ENG).

⁶ *Id.*, p. 28 (C-0023-ENG).

⁷ See Certification of Ownership Structure of Calizas Industriales del Carmen, S.A. de C.V. and Related Mexican Subsidiaries (27 August 2018) (C-0005-ENG); *see also* Copy of Articles of Incorporation of Calizas Industriales del Carmen, S.A. de C.V. (4 March 1986) (C-0006-SPA).

⁸ Mexico Federal Official Gazette, 1983-1988 National Development Plan, p. 54 (31 May 1983) (C-0024-SPA) (“6.5.2. Purposes - The recovery of the bases of growth and the structural reorientation of the country’s

called for a substantial upgrade of Mexico's port system, including the construction of specialized terminals to manage the transportation of minerals.⁹ To achieve these goals, in 1984, Mexico launched national programs aimed at developing and promoting the construction of terminals and specialized transportation to strengthen Mexico's competitiveness in the mining sector.¹⁰

22. Attracted and encouraged by these policies, in the early 1980s, Legacy Vulcan made concerted efforts to locate stone deposits near deep water that could be quarried for export to the United States.¹¹ After years of exploration and investment of substantial resources in surveys and assessments, Legacy Vulcan determined that the State of Quintana Roo presented one of the richest and best situated deposits of high-quality limestone in the entire Yucatan Peninsula to develop the Project.¹²

C. LEGACY VULCAN'S INVESTMENT IN QUINTANA ROO

23. In the mid-1980s, Legacy Vulcan partnered with Mexico's then largest industrial and construction conglomerate, Grupo Ingenieros Civiles Asociados ("Grupo ICA"), in a joint venture to (i) establish a limestone quarry in Quintana Roo; (ii) build an extraction and processing plant; (iii) construct a port close to the plant; (iv) deploy a fleet of cargo vessels to export

development require a more efficient link with the world economy, particularly in terms of industry and foreign trade [...] [and] foreign investment. Thus, the economic and social strategy of the Plan sets three main objectives for the country's international economic policy: - To progressively expand, diversify, and balance trade relations with the world, promoting non-oil exports in a sustained manner[.]") (free translation, the original text reads: "6.5.2. Propósitos — La recuperación de las bases del crecimiento y la reorientación estructural del desarrollo del país exigen una vinculación más eficiente con la economía mundial, particularmente en materia de industria y comercio exterior [...] [e] inversión extranjera. Así, la estrategia económica y social del Plan le fija tres objetivos principales a la política económica internacional del país: — Ampliar, diversificar y equilibrar progresivamente las relaciones comerciales con el exterior, fomentando de manera sostenida las exportaciones no petroleras[.]").

⁹ *Id.*, p. 101 (C-0024-SPA) ("8.9.4.3. Maritime and river transport. [...] Build specialized and multipurpose terminals to handle container, grain, and mineral movements, and to support the development of multimodal transport.") (free translation, the original text reads: "8.9.4.3. Transporte marítimo y fluvial. [...] Construir terminales especializadas y de usos múltiples para atender movimientos de contenedores, cereales y minerales, y para apoyar el desarrollo del transporte multimodal.").

¹⁰ Mexico Federal Official Gazette, 1984-1988 National Mining Plan, p. 30 (17 August 1984) (C-0025-SPA) ("Promote the construction of terminals and the availability of specialized transportation to strengthen the competitiveness of Mexican mining.") (free translation, the original text reads: "Promover la construcción de terminales y la disponibilidad de transporte especializado para fortalecer la competitividad de la minería mexicana.").

¹¹ Witness Statement- [REDACTED]-Claimant's Memorial-ENG, ¶ 10.

¹² *Id.*, ¶¶ 10-12.

production to the United States; and (v) create a network of distribution yards in the United States designed to receive CALICA's production and market it throughout the U.S. Gulf Coast.¹³

24. To achieve these goals, the joint venture partners incorporated three operating entities: (i) CALICA; (ii) Vulica Shipping Company, Limited ("Vulica"); and (iii) Vulica/ICA Distribution Company ("Vulica/ICA").¹⁴ CALICA is responsible for operating the Project's quarrying, processing, and port operations in Mexico. It thus undertook to construct the processing plant and the port in Mexico.¹⁵ Vulica is responsible for transporting CALICA's production from Mexico to the United States with its own fleet of vessels.¹⁶ Until 2001, Vulica/ICA was in charge of the sales and marketing operations of the Project in the United States.¹⁷ That function is now performed by Vulcan Construction Materials, LLC.¹⁸

1. The Investment Agreement

25. On 6 August 1986, consistent with Mexico's policies to attract non-oil sector investment, CALICA, Mexico's Federal Government, and the State of Quintana Roo entered into an agreement whereby these government entities (i) authorized the Project from an environmental standpoint based on required environmental impact studies;¹⁹ (ii) committed to

¹³ *Id.*, ¶ 12; Vulcan Materials Company, *The Calica Story*, VIMEO, <https://vimeo.com/418111594> (uploaded 13 May 2020) (C-0026-ENG). At the time, the joint venture was known as the Crescent Market Project. Vulcan Materials Company, Form 10-K for the 1989 fiscal year, p. 109 (30 March 1990) (C-0027-ENG).

¹⁴ Witness Statement-[REDACTED] Claimant's Memorial-ENG, ¶ 14.

¹⁵ Investment Agreement, p. 3 (6 August 1986) (C-0010-SPA); Witness Statement-[REDACTED] - Claimant's Memorial-ENG, ¶¶ 20, 27, 46.

¹⁶ Witness Statement-[REDACTED] -Claimant's Memorial-ENG, ¶ 47. For export volumes that cannot be delivered on Legacy Vulcan's vessels, Legacy Vulcan uses third-party chartered ships from Canada Steamship Lines or "CSL." *Id.*

¹⁷ *Id.*, ¶ 14.

¹⁸ *Id.*

¹⁹ Investment Agreement, p. 2 (6 August 1986) (C-0010-SPA) ("The site where the project will be developed [...] is located in a coastal area that includes ecosystems that could be affected. For this reason, SEDUE carried out the required environmental impact studies.") (free translation, the original text reads: "El lugar en donde se desarrollará el proyecto [...] se localiza en una zona litoral que comprende ecosistemas que pudieran ser afectados. Por tal motivo, la SEDUE realizó los estudios de impacto ambiental requeridos"), p. 5 ("SEDUE, based on the final results of its evaluation of the Environmental Impact Statement of the Project, with the support of the *Instituto de Ecología, A.C.* and the *Centro de Investigaciones y Estudios Avanzados del [Instituto Politécnico Nacional de México]*, Mérida Unit, [SEDUE] considers that the Project proposed by [CALICA] is feasible[.]") (free translation, the original text reads: "La SEDUE con base en los resultados finales de su evaluación realizada a la Manifestación de Impacto Ambiental del Proyecto, con el apoyo del Instituto de Ecología, A.C. y el Centro de Investigaciones y Estudios Avanzados del [Instituto

facilitate other permits required to develop the Project;²⁰ and (iii) acknowledged CALICA's right to exploit the limestone reserves for as long as economically feasible (the "Investment Agreement").²¹

26. The parties to the Investment Agreement expressly acknowledged and understood that the Project would bring economic development to the region, create jobs, decrease migration from rural to urban areas, and generate favorable foreign currency inflows during a time when Mexico was experiencing great economic uncertainty.²² These benefits would accrue exclusively from private investment, as CALICA undertook to cover all the costs and expenses of the Project.²³

27. The Investment Agreement initially called for the development of two lots: (i) La Rosita, where the main quarry and the processing plant would be located; and (ii) Punta Venado, where a port terminal would be built.²⁴ To accommodate the potential expansion of the Project, the Investment Agreement envisioned the "modification of the characteristics" of the Project.²⁵

Politécnico Nacional de México], Unidad Mérida, considera factible desde el punto de vista ambiental, la realización del Proyecto propuesto por [CALICA][.].").

²⁰ *Id.* p. 7 (C-0010-SPA) ("SEDUE, the SCT and the STATE GOVERNMENT undertake, within the scope of their respective competences, to coordinate their functions and to provide the facilities to obtain the permits required to carry out the [CALICA] Project.") (free translation, the original text reads: "SEDUE, SCT y el GOBIERNO DEL ESTADO se comprometen, en la esfera de sus respectivas competencias, a coordinar sus funciones y a dar las facilidades para la obtención de los permisos requeridos para la realización del Proyecto [de CALICA].").

²¹ *Id.*, p. 2 (C-0010-SPA) ("The period of extraction shall be subject to market conditions and economic feasibility.") (free translation, the original text reads: "El tiempo de explotación estará sujeto a las condiciones de mercado y a la factibilidad económica."). Under Mexican law, quarrying activities are not subject to concessions and the petrous materials within a private property belong to the owner of that property. See Expert Report- [REDACTED]-Environmental-Claimant's Memorial-SPA, ¶ 20.

²² Investment Agreement, p. 4 (6 August 1986) (C-0010-SPA) ("The STATE considers the Project viable because of the benefits it can bring [to the State of Quintana Roo]. [...] It has also taken into account that since the products obtained from the exploitation are to be exported, this activity will be a source of foreign currency for the country.") (free translation, the original text reads: "El ESTADO considera viable el Proyecto por los beneficios que puede reportar [al Estado de Quintana Roo]. [...] Ha tomado en cuenta, asimismo que estando destinados los productos obtenidos con la explotación para su exportación, la citada actividad será una fuente generadora de divisas para el país.").

²³ *Id.*, p. 5 (C-0010-SPA) ("All project expenses will be incurred by and at the risk of [CALICA].") (free translation, the original text reads: "Todos los gastos del Proyecto serán erogados por cuenta y riesgo de [CALICA].").

²⁴ *Id.*, pp. 2-3 (C-0010-SPA).

²⁵ *Id.*, p. 6 (C-0010-SPA) ("[CALICA] shall submit to the consideration of SEDUE, SCT and the STATE [...] any action that modifies the characteristics of the Project.") (free translation, the original text reads: "[CALICA] deberá someter a la consideración de la SEDUE, SCT y al ESTADO [...] toda acción que modifique las características del Proyecto.").

The Investment Agreement also contemplated that, at the end of the Project, the properties, including the lakes created once quarrying is completed, could be further developed for tourism, housing, or recreational purposes.²⁶

28. In 1987, Mexico's President, Miguel de la Madrid, personally endorsed the Project as Legacy Vulcan and Grupo ICA committed to invest [REDACTED] to develop it.²⁷ [REDACTED]
[REDACTED].²⁸

2. The Project's Development and Expansion

29. Shortly after Mexico authorized the Project through the Investment Agreement, Mexico granted CALICA a permit and the CALICA Port Concession (as defined below) authorizing the construction and use of a port terminal to load petrous materials in Punta Venado (the "Port Terminal").²⁹ In 1986-1987, Rancho Piedra Caliza, S.A. de C.V. ("RAPICA"), a Mexican subsidiary of CALICA, acquired La Rosita and Punta Venado and leased those lots to CALICA.³⁰ Both lots are located in the Municipality of Cozumel, Quintana Roo, approximately 10 kilometers south of Playa del Carmen, then a little-known fishing village.

30. CALICA broke ground shortly thereafter and commenced port operations by approximately January 1990.³¹ By 1991, Legacy Vulcan had built the CALICA Network and successfully exported its first shipments of CALICA aggregates to the United States.³²

²⁶ *Id.*, p. 3 (C-0010-SPA) ("Also [the Project] contains a study for the use of the excavated area at the end of the useful life of the stone material bank, with the possibility of using it as a lake suitable for tourist real estate development.") (free translation, the original text reads: "Asimismo, [el Proyecto] contiene un estudio para el aprovechamiento del área excavada al término de la vida útil del banco de material pétreo, con la posibilidad de utilizarlo como lago propicio para un desarrollo inmobiliario turístico.").

²⁷ Agreement entered into between Grupo ICA and Vulcan Materials Company, witnessed by Miguel de la Madrid Hurtado, President of the United Mexican States, pp. 2-3 (6 July 1987) (C-0011-SPA). President de la Madrid acted as "witness of honor" of the agreement. *Id.*, p. 3 (C-0011-SPA).

²⁸ Witness Statement-[REDACTED]-Claimant's Memorial-ENG, ¶ 58.

²⁹ Provisional Permit to Begin Building the Project No. 28/86, p. 1 (10 November 1986) (C-0028-SPA); Concession granted by the Executive Branch through the SCT to CALICA, p. 1 (21 April 1987) (C-0012-SPA).

³⁰ Punta Venado Title Deed, p. 6 (18 December 1986) (C-0029-SPA); La Rosita Title Deed, pp. 2-3 (22 May 1987) (C-0030-SPA).

³¹ Witness Statement-[REDACTED]-Claimant's Memorial-ENG, ¶ 18.

³² Vulcan Materials Company, Form 10-K for the 1991 fiscal year, p. 2 (27 March 1992) (C-0031-ENG).

31. Punta Venado, which is adjacent to La Rosita, hosts the Port Terminal built by CALICA. Punta Venado comprises an area of approximately 202 hectares.³³ La Rosita, where CALICA's first quarry and processing plant are located, comprises an area of roughly 930 hectares.³⁴

32. Although La Rosita and Punta Venado are separated by the Chetumal-Cancún Federal Highway, they are connected by a bridge and an underground tunnel, both built by CALICA. The bridge allows CALICA's vehicles to circulate between the properties, and the tunnel is used to transfer the quarry's production from the processing plant to the staging or loading area next to the Port Terminal without interfering with the highway's traffic.³⁵

33. CALICA spent approximately [REDACTED] to build the Port Terminal.³⁶ As contemplated in the Investment Agreement, CALICA first excavated over 80,000 m² of land — about the same area as twelve soccer fields — to create the harbor.³⁷ The construction of the deep-water port required substantial movement of soil and dredging for the site to be able to host Panamax cargo vessels.³⁸ The port also required various breakwaters designed to protect it from the influence of sea currents and of strong winds from the Caribbean Sea.³⁹ Once the harbor was dredged, CALICA built an 82,500 m² port and concrete docks to host a private terminal for its cargo vessels and for loading the Project's production.⁴⁰

34. During the 1990s, CALICA built — at Mexico's request — a public terminal within the Port Terminal for small cruise ships and for passenger and cargo ferries connecting Cozumel

³³ Punta Venado Title Deed, p. 6 (18 December 1986) (C-0029-SPA).

³⁴ La Rosita Title Deed, pp. 2-3 (22 May 1987) (C-0030-SPA).

³⁵ Witness Statement-[REDACTED] Claimant's Memorial-ENG, ¶ 22.

³⁶ *Id.*, ¶ 16.

³⁷ Investment Agreement, Annex 2, p. 7 (6 August 1986) (C-0010-SPA). One soccer field equals approximately 7,000 m².

³⁸ Panamax vessels are the mid-sized cargo ships that are capable of passing through the lock chambers of the original Panama Canal.

³⁹ Investment Agreement, Annex 1, Section B (6 August 1986) (C-0010-SPA).

⁴⁰ *Id.*, Annex 1, p. 15 (C-0010-SPA).

Island with continental Quintana Roo. To construct this terminal, CALICA had to dredge — at no cost to Mexico — an additional portion of the harbor’s area as shown in Picture 1 below.⁴¹

35. The public terminal has been essential to the development of Cozumel. Cozumel’s critical supplies are provided via Punta Venado. Between 2013 and 2018, the public terminal received roughly 10,803 ferries — an average of 1,800 ferries per year.⁴² Until 2012, large cruise ships docked at Punta Venado on a regular basis.⁴³

Picture 1 - Close-Up Aerial View of CALICA’s Port Terminal



36. Before 1991, all shipments from the Project were made by chartered vessels.⁴⁴ In 1991, Legacy Vulcan acquired two self-unloading Panamax vessels to transport its products to the United States.⁴⁵

37. Consistent with the Investment Agreement, in June and August 1996, Legacy Vulcan acquired two additional lots in Quintana Roo — El Corchalito and La Adelita — for the sole

⁴¹ Witness Statement- [REDACTED] -Claimant’s Memorial-ENG, ¶ 21.

⁴² SCT Monthly Reports of Ferries and Coastal Vessels in Punta Venado (2013-2018) (C-0032-SPA).

⁴³ SCT Historical Report of Cruise Ship Arrivals (2011-2018) (C-0033-SPA).

⁴⁴ Vulcan Materials Company, Form 10-K for the 1991 fiscal year, p. 2 (27 March 1992) (C-0031-ENG).

⁴⁵ *Id.* (C-0031-ENG).

purpose of expanding the Project's quarrying operations.⁴⁶ El Corchalito and La Adelita are located in the Municipality of Solidaridad.⁴⁷ El Corchalito comprises an area of roughly [REDACTED] hectares and borders La Rosita to the north-east.⁴⁸ La Adelita comprises an area of roughly [REDACTED] hectares and borders La Rosita to the south-west, as shown in Picture 2 below.⁴⁹

38. CALICA is currently quarrying only in La Rosita. CALICA quarried El Corchalito from 2001 until 2018, when Mexico shut down CALICA's operations in that lot, as explained in Part II.H.3 below. CALICA has been unable to commence quarrying operations in La Adelita, as explained in Part II.H.1 below.

Picture 2 - [REDACTED]



⁴⁶ El Corchalito Title Deed, p. 5 (28 August 1996) (C-0034-SPA); La Adelita Title Deed, p. 6 (21 June 1996) (C-0035-SPA). RAPICA purchased El Corchalito and La Adelita and leased them to CALICA immediately thereafter for the sole purpose of expanding the Project. Witness Statement-[REDACTED]-Claimant's Memorial-ENG, ¶ 22.

⁴⁷ El Corchalito Title Deed, p. 5 (28 August 1996) (C-0034-SPA); La Adelita Title Deed, p. 6 (21 June 1996) (C-0035-SPA). The Municipality of Solidaridad was established on 28 July 1993. Quintana Roo Official Gazette, Amendment to the Constitution of Quintana Roo, p. 6 (28 July 1993) (C-0036-SPA).

⁴⁸ El Corchalito Title Deed, p. 4 (28 August 1996) (C-0034-SPA).

⁴⁹ La Adelita Title Deed, p. 3 (21 June 1996) (C-0035-SPA).

3. The CALICA Network's Operations

39. The CALICA Network is a vertically-integrated project, with operations that constitute one seamless chain.⁵⁰ Limestone is extracted, processed, and fractionated in Mexico through state-of-the-art, automated processes.⁵¹ Most of the resulting products — different blends of aggregates of various sizes — are then transported by vessels to dedicated yards along the Gulf Coast and Atlantic seaboard of the United States.⁵² A [REDACTED] portion of the Project's production is sold in Mexico.⁵³

40. The first step in the production process involves clearing the land.⁵⁴ The vegetation in the area to be quarried is removed, and the soil is graded and leveled to allow the operation of heavy machinery.⁵⁵ Once the soil is graded and leveled, the selected area is drilled and blasted to extract the shot rock.⁵⁶ Multiple drills are commonly used to create a pattern.⁵⁷

Picture 3 - Drills Preparing Site for Blasting



⁵⁰ Witness Statement-[REDACTED]-Claimant's Memorial-ENG, ¶ 13; Vulcan Materials Company, *The Calica Story*, VIMEO, <https://vimeo.com/418111594> (uploaded 13 May 2020) (C-0026-ENG).

⁵¹ Witness Statement-[REDACTED]-Claimant's Memorial-ENG, ¶¶ 28 *et seq.*

⁵² *Id.*, ¶¶ 13, 49.

⁵³ *Id.*, ¶ 41.

⁵⁴ *Id.*, ¶ 28. Vulcan Materials Company, *The Calica Story*, VIMEO, <https://vimeo.com/418111594> (uploaded 13 May 2020) (C-0026-ENG) (*see* 1:03).

⁵⁵ Witness Statement-[REDACTED]-Claimant's Memorial-ENG, ¶ 28.

⁵⁶ *Id.*, ¶ 30.

⁵⁷ *Id.*

41. Extraction of shot rock from the selected area occurs in phases.⁵⁸ The first phase involves extraction of material above the water table, to a depth of approximately [REDACTED].⁵⁹ Quarrying above the water table is less expensive and yields higher quality limestone.⁶⁰

Picture 4 - Loader Loading Above-Water Shot Rock onto Off-Road Haul Truck



42. Once all the shot rock extracted above the water table has been hauled, the second extraction phase begins with the drilling and blasting of reserves under the water table at an average depth of [REDACTED].⁶¹ Extraction below the water table requires the use of draglines designed to meet the Project's specifications.⁶² Wet stone extracted below the water table must dry for a couple of weeks before it can be processed.⁶³

⁵⁸ *Id.*, ¶ 31.

⁵⁹ *Id.*

⁶⁰ *Id.*, ¶¶ 29, 40.

⁶¹ *Id.*, ¶ 33; Vulcan Materials Company, *The Calica Story*, VIMEO, <https://vimeo.com/418111594> (uploaded 13 May 2020) (C-0026-ENG) (see 1:09, 2:04).

⁶² Witness Statement-[REDACTED]-Claimant's Memorial-ENG, ¶ 33.

⁶³ *Id.*

Picture 5 - Dragline Extracting Below-Water Shot Rock



Figure 1 -

43. The extracted shot rock is eventually processed into the products that end-customers use to build bridges, schools, roads, houses, and other infrastructure.⁶⁴ This

⁶⁴ *Id.*, ¶ 38.

processing occurs at CALICA's Processing Plant in La Rosita, through an elaborate automated process of turning larger rocks into smaller material.⁶⁵ After extraction, the shot rock (which could be as large as big boulders of about 1.5 meters in size) is loaded onto off-road haul trucks and transported to the Primary Crusher.⁶⁶ There, the rock is delivered into the Primary Crusher's hopper, where a feeder controls the rate at which the rock enters the crusher. The crusher then breaks the rock into smaller pieces, as reflected in Picture 6 below.⁶⁷ The Primary Crusher can process, on average, 3,000 tons of rock per hour.⁶⁸

Picture 6 - Off-Road Haul Trucks Feeding Shot Rock Into the Primary Crusher



44. The smaller material that emerges from the Primary Crusher, measuring about 14 inches, is then taken through conveyor belts to the Secondary Crushing Plant pictured below.⁶⁹ There, the resulting, twice-crushed material goes through a screen that filters material smaller than 1.5 inches.⁷⁰ Once washed, this smaller material constitutes one of the finished products that Legacy Vulcan sells.⁷¹

⁶⁵ *Id.*, ¶¶ 32-35; Vulcan Materials Company, *The Calica Story*, VIMEO, <https://vimeo.com/418111594> (uploaded 13 May 2020) (C-0026-ENG) (see 2:37).

⁶⁶ Witness Statement-[REDACTED]-Claimant's Memorial-ENG, ¶ 32.

⁶⁷ *Id.*

⁶⁸ *Id.*, ¶ 34.

⁶⁹ *Id.*, ¶ 35; Vulcan Materials Company, *The Calica Story*, VIMEO, <https://vimeo.com/418111594> (uploaded 13 May 2020) (C-0026-ENG) (see 2:47).

⁷⁰ Witness Statement-[REDACTED]-Claimant's Memorial-ENG, 35.

⁷¹ *Id.*

Picture 7 - Secondary Crushing Plant

45. Larger material that cannot make it through the tiny holes of the screen at the Secondary Crushing Plant continues on its journey to becoming smaller than 1.5 inches.⁷² It is transported through conveyor belts to the Tertiary Crushing Plant, where the material is broken up into even smaller pieces.⁷³ Those smaller pieces are then returned to screens through which the 1.5-inch-or-less material passes.⁷⁴ Having completed the crushing cycle, this finished product is then transported through another conveyor belt to the Wash Plant, where the material is washed with recycled water to remove fine particles and dust.⁷⁵ The washed material is then further screened and separated into different sizes for transfer to the staging area at the Port Terminal.⁷⁶

⁷² *Id.*

⁷³ *Id.*

⁷⁴ *Id.*

⁷⁵ *Id.*, ¶ 36. In line with the industry's best practices, CALICA recycles the water used at the Wash Plant.

⁷⁶ *Id.*

Picture 8 - Screen Tower Where Sizing Occurs



46. Finished product from the Processing Plant in La Rosita is then transported to the Port Terminal through a two-mile-long conveyor belt that goes through a tunnel to clear the highway dividing La Rosita from Punta Venado.⁷⁷ Once it arrives at Punta Venado, the product is stockpiled according to the material's size using a stockpile stacker (pictured below).⁷⁸

Picture 9 - Stockpile Stacker



⁷⁷ *Id.*, ¶¶ 22, 36; Vulcan Materials Company, *The Calica Story*, VIMEO, <https://vimeo.com/418111594> (uploaded 13 May 2020) (C-0026-ENG) (see 3:15).

⁷⁸ Witness Statement- [REDACTED] -Claimant's Memorial-ENG, ¶ 36.

47. The finished product is then loaded onto a vessel for shipping to the United States.⁷⁹ When the vessel docks at CALICA's private terminal in Punta Venado, the finished product is loaded onto the vessel through an automated process.⁸⁰ In the case of washed materials, they are blended with other washed materials of different sizes as they are loaded onto the ship to (i) obtain one of several final products that Legacy Vulcan sells, or (ii) meet a customer's particular specifications.⁸¹ CALICA's final products are designed to meet the different requirements set by U.S. state regulators in the markets where Legacy Vulcan sells its products.⁸² In the case of base (non-washed) materials, the blending occurs during the transfer from production to the staging area. These products are then transferred to the automated shiploader through a specially designed rail-mounted bucket-wheel reclaimer that places the products on a conveyor belt (pictured below).⁸³

Picture 10 - Rail-Mounted Bucket-Wheel Reclaimer



⁷⁹ *Id.*, ¶ 37; Vulcan Materials Company, *The Calica Story*, VIMEO, <https://vimeo.com/418111594> (uploaded 13 May 2020) (C-0026-ENG) (see 4:47).

⁸⁰ Witness Statement- [REDACTED] -Claimant's Memorial-ENG, ¶ 37.

⁸¹ *Id.*

⁸² *Id.*, ¶ 37.

⁸³ *Id.*

48. Once the materials have been blended, an automated shiploader transfers the product to the vessel. It usually takes about 14 hours to load a vessel, [REDACTED]

[REDACTED] .⁸⁴

Picture 11 - Automated Shiploader



49. CALICA's products are shipped to one of Legacy Vulcan's 11 yards in Texas, Louisiana, Alabama, Florida, and soon South Carolina.⁸⁵ In addition, CALICA regularly ships its products to two direct-customer shipment locations in Lake Charles, Louisiana, and Jacksonville, Florida.⁸⁶ The Network has a fleet of three dedicated self-unloading Panamax vessels capable of transporting up to 70,000 tons⁸⁷ of material each, depending on the depth of the port of call.⁸⁸ These vessels were specially designed to meet the needs of the Project, and two of the three were recently commissioned into service.⁸⁹

⁸⁴ *Id.*

⁸⁵ *Id.*, ¶ 49.

⁸⁶ *Id.*

⁸⁷ All references to "ton" or "tons" in this Memorial refer to short tons of 2,000 pounds rather than metric tons.

⁸⁸ Witness Statement-[REDACTED]-Claimant's Memorial-ENG, ¶ 46.

⁸⁹ *Id.*, ¶ 53.

Picture 12 - Legacy Vulcan Vessel Arriving at a Yard in the United States

50. Once the vessel arrives at its port of destination, it automatically unloads its cargo.⁹⁰ From there, the product is transported by truck to its final destination.⁹¹

4. The CALICA Network's Competitive Advantages

51. The CALICA Network has three key competitive advantages over similar quarrying operations elsewhere, making it a critical asset for Legacy Vulcan. *First*, the geology in CALICA's lots is rich in high-quality limestone deposits.⁹² The stone is on average 98% calcium carbonate, and its high-quality composition makes it suitable for use as construction aggregate.⁹³ Its low density and high porosity also makes the stone relatively lighter than other competing materials, reducing the cost of transportation.⁹⁴

52. These attributes make it possible for Legacy Vulcan's customers to obtain more volume of high-quality materials — with attendant better yields — at a lower price than similar products.⁹⁵ As the shaded area in the map below shows, there are few or no indigenous stone deposits in the Gulf Coast and Atlantic seaboard of the United States.⁹⁶ Markets in that area,

⁹⁰ *Id.*

⁹¹ *Id.*, ¶ 49.

⁹² *Id.*, ¶ 39.

⁹³ *Id.*

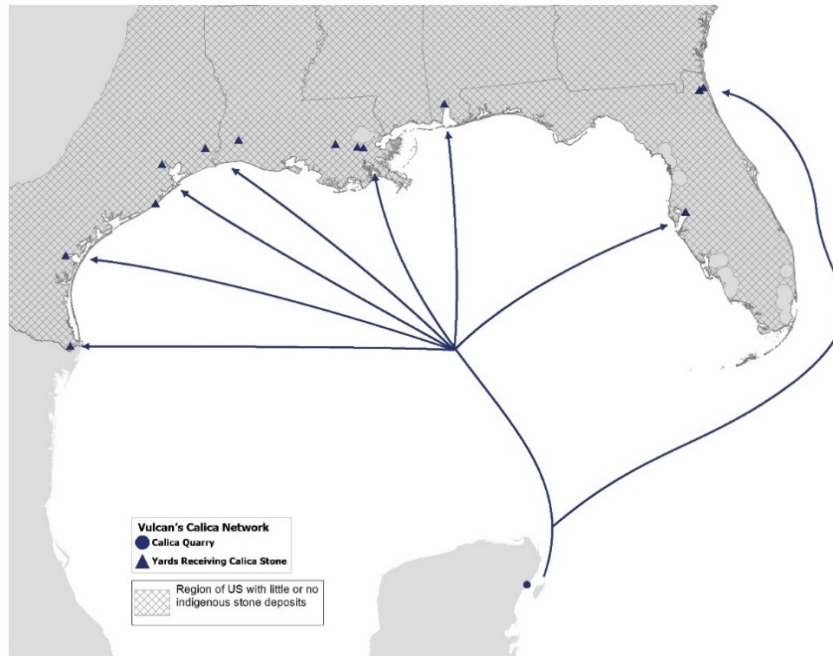
⁹⁴ *Id.*

⁹⁵ *Id.*

⁹⁶ *Id.*, ¶¶ 9, 44.

therefore, must be supplied with stone sourced from other locations.⁹⁷ To be competitive, having access to the most efficient means of transportation is key.⁹⁸

Map 1 - Dearth of Stone Deposits in Southeast U.S. and Legacy Vulcan's U.S. Distribution Yards



53. *Second*, the Project's location and proximity to the Gulf of Mexico provides access to the most efficient means of transportation to supply the U.S. Gulf Coast and Atlantic Seaboard: seagoing vessel. From Punta Venado, Legacy Vulcan uses its fleet of owned and chartered Panamax cargo vessels to supply yards and projects from Texas to Florida, and soon South Carolina.⁹⁹ These vessels represent by far the most efficient and economical mode of transportation for aggregates, which may be sold at very competitive prices as a result.¹⁰⁰ Transportation expenses tend to constitute a significant part of the cost of the finished product,

⁹⁷ *Id.*

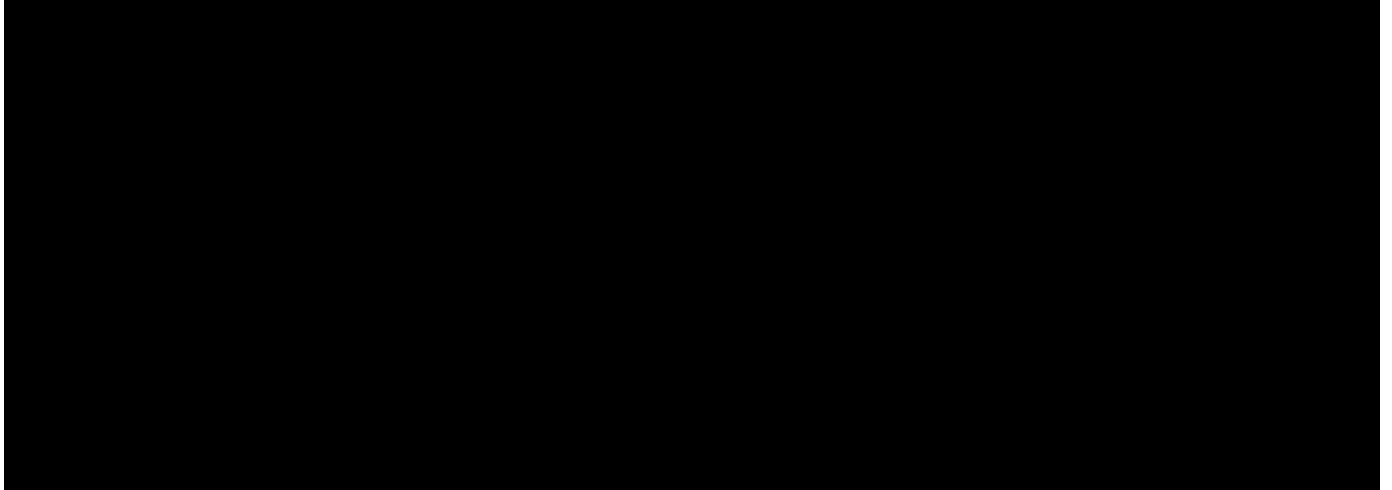
⁹⁸ *Id.*, ¶¶ 43-45.

⁹⁹ *Id.*, ¶¶ 44 *et seq.*

¹⁰⁰ *Id.*, ¶ 45.

given its weight.¹⁰¹ As the graphic below shows, one ton of aggregates may be moved to market 40 times farther by Legacy Vulcan's owned or chartered vessels than by truck for the same cost.¹⁰²

Figure 2 - [REDACTED]



54. *Third*, the close proximity of CALICA's reserves to the Port Terminal makes the Project unique and substantially reduces overall operational costs. CALICA spent considerable resources to locate high-quality petrous materials near deep water for export to the United States in an economically viable manner. The contiguity of La Rosita, El Corchalito, and La Adelita with the Port Terminal at Punta Venado offers an unmatched competitive advantage.¹⁰³

D. LEGACY VULCAN'S CONTRIBUTIONS TO THE SOCIO-ECONOMIC DEVELOPMENT OF QUINTANA ROO

55. The Project has significantly contributed to the economic development of Quintana Roo and Playa del Carmen in particular.¹⁰⁴ CALICA is the largest employer in the state outside the tourism industry, generating direct employment for more than 400 workers and indirect employment for over 2,600 people.¹⁰⁵

¹⁰¹ *Id.*

¹⁰² *Id.*

¹⁰³ *Id.*, ¶ 44.

¹⁰⁴ Witness Statement-[REDACTED]-Claimant's Memorial-ENG, ¶ 5.

¹⁰⁵ Vulcan Materials Company, Form 10-K for the 2019 fiscal year, p. 14 (26 February 2020) (C-0023-ENG); Witness Statement-[REDACTED]-Claimant's Memorial-ENG, ¶ 5.

56. Since the launch of the Project, CALICA has played a major role in the region's infrastructure development.¹⁰⁶ In the late 1980s, CALICA installed the first telephone and water treatment networks in Playa del Carmen.¹⁰⁷ In addition to the Port Terminal (the most important access point from Quintana Roo to Cozumel Island), CALICA has built a housing complex, a school, and sports and social facilities for its employees and the community; assisted with the construction of the local electricity grid; and supplied the aggregates used to build Cancún's international airport and northern Quintana Roo's interstate highways and bridges.¹⁰⁸ CALICA has also donated over 1.23 million tons of aggregates for public schools, clinics, hospitals, roads, parks, and emergency-services infrastructure in the state.¹⁰⁹

57. As Mexico has recognized, CALICA conducts quarrying activities in an environmentally, culturally, and socially conscious manner. Since 2003, the *Procuraduría Federal de Protección al Ambiente* ("PROFEPA"), Mexico's environmental enforcement agency, has awarded CALICA numerous "Clean Industry" certificates for outstanding environmental performance.¹¹⁰ In 2012, Mexico audited CALICA's environmental permits and authorizations and found that CALICA complied with environmental laws and regulations.¹¹¹

58. CALICA has also spearheaded or promoted multiple environmental and archeological programs in the region. For example, CALICA operates a nursery with more than 20,000 plants to sustain reforestation efforts at the quarry and elsewhere, a program that earned the company a spot as a finalist for the Wildlife Habitat Council's 2016 Species of Concern Project Award.¹¹² CALICA protects natural areas, including underwater caves and *cenotes*, that serve as sanctuaries to local wildlife and plants.¹¹³ As a sign of its continued commitment to the

¹⁰⁶ Witness Statement-[REDACTED]-Claimant's Memorial-ENG, ¶ 6.

¹⁰⁷ *Id.*

¹⁰⁸ *Id.*

¹⁰⁹ *Id.*

¹¹⁰ Clean Industry Certificate (23 June 2003) (C-0037-SPA); Clean Industry Certificate (16 December 2005) (C-0038-SPA); Clean Industry Certificate (31 July 2008) (C-0039-SPA); Clean Industry Certificate (28 February 2012) (C-0040-SPA); Clean Industry Certificate (2 June 2014) (C-0041-SPA); Clean Industry Certificate (27 July 2016) (C-0042-SPA).

¹¹¹ Letter No. PFPA03.2/2C27.5/0006/12/0037 from Arturo Estrada Ángel (PROFEPA) to CALICA, p. 56 (10 December 2012) (C-0043-SPA).

¹¹² 2016 WHC Award Winners and Nominees, Wildlife Habitat Council (C-0044-ENG).

¹¹³ Vulcan Materials Company, *The Calica Story*, VIMEO, <https://vimeo.com/418111594> (uploaded 13 May 2020) (C-0026-ENG) (see 1:17); Witness Statement-[REDACTED]-Claimant's Memorial-ENG, ¶ 7.

environment, in September 2019, Legacy Vulcan announced the 2019-2021 Environmental Sustainability Strategy in collaboration with the State of Quintana Roo and local NGOs.¹¹⁴ CALICA also has a long-standing collaboration with the Mexican National Institute of Anthropology and History (*Instituto Nacional de Antropología e Historia*) to map out and preserve Mayan archeological sites within CALICA's properties.¹¹⁵

59. Since 2010, more than 1,900 CALICA volunteers have participated in 148 local activities, totaling over 36,000 hours of community service.¹¹⁶ CALICA also founded and sponsors a bilingual school hosting over 520 students.¹¹⁷

60. Legacy Vulcan's investments will continue contributing to the economy of Quintana Roo once limestone reserves are exhausted at CALICA's sites. The quarry is located in an area that has become the most important tourist destination in southeastern Mexico in recent years: the Cancún-Tulum corridor. As shown in the picture below, the lakes that naturally form at CALICA's lots after quarrying have great potential for tourist and residential developments, as envisioned in the Investment Agreement.¹¹⁸

Cenotes are deep sinkholes naturally formed by the collapse of surface limestone that exposes ground water underneath.

¹¹⁴ *Sac-Tun, previously CALICA, Reaffirms Commitment to Sustainability and Presents Its Environmental Strategy and New Image*, SAC TUN PRESS RELEASE (29 September 2019) (C-0045-ENG). The 2019-2021 Environmental Sustainability Strategy includes five priority programs: (i) conservation of endemic, threatened or endangered species of flora and fauna; (ii) conservation of priority environmental services and ecosystems; (iii) reforestation and restoration of land and sea areas to help them better adapt to climate change; (iv) environmental education, citizen science and sustainable communities; and (v) special projects, such as cleanup of sargassum, an invasive type of seaweed, in Quintana Roo. *Id.*

¹¹⁵ Witness Statement-[REDACTED]-Claimant's Memorial-ENG, ¶ 7; Vulcan Materials Company, *The Calica Story*, VIMEO, <https://vimeo.com/418111594> (uploaded 13 May 2020) (C-0026-ENG) (see 1:51).

¹¹⁶ Witness Statement-[REDACTED]-Claimant's Memorial-ENG, ¶ 8.

¹¹⁷ *Id.*, ¶ 6; Vulcan Materials Company, *The Calica Story*, VIMEO, <https://vimeo.com/418111594> (uploaded 13 May 2020) (C-0026-ENG) (see 6:21).

¹¹⁸ Investment Agreement, p. 3 (6 August 1986) (C-0010-SPA) ("Also [the Project] contains a study for the use of the excavated area at the end of the useful life of the stone material bank, with the possibility of using it as a lake suitable for tourist real estate development.") (free translation, the original text reads: "Asimismo, [el Proyecto] contiene un estudio para el aprovechamiento del área excavada al término de la vida útil del banco de material pétreo, con la posibilidad de utilizarlo como lago propicio para un desarrollo inmobiliario turístico.").

Picture 13 - Picture of a Naturally Formed Lake at El Corchalito



E. BACKGROUND TO THE 2014 AGREEMENTS

61. At the beginning of 2001, Legacy Vulcan acquired Grupo ICA's interests in the Project joint venture.¹¹⁹ Shortly thereafter, CALICA became the target of various measures by Mexico and its instrumentalities affecting (1) CALICA's rights under the CALICA Port Concession (as defined below), (2) the taxes applicable to the Project, and (3) CALICA's ability to quarry La Adelita. CALICA successfully challenged most of these measures in Mexican courts, and, in 2014, at Mexico's request, entered into an agreement to address all of these matters.

1. Issues Affecting the CALICA Port Concession

a) The CALICA Port Concession

62. On 21 April 1987, pursuant to the Investment Agreement, Mexico's Ministry of Communications and Transportation (*Secretaría de Comunicaciones y Transportes* or "SCT") granted CALICA a concession to build and to operate a private port terminal to load petrous materials (the "CALICA Port Concession").¹²⁰ Under the CALICA Port Concession, CALICA

¹¹⁹ Witness Statement-[REDACTED]-Claimant's Memorial-ENG, ¶ 26; Vulcan Materials Company, Form 10-K for the 2001 fiscal year, p. 5 (27 March 2002) (C-0046-ENG).

¹²⁰ Concession granted by the Executive Branch through the SCT to CALICA, pp. 1-2 (21 April 1987) (C-0012-SPA).

undertook to donate to the SCT six hectares of land to build a public terminal.¹²¹ CALICA also committed to maintain and repair the entire Port Terminal (both the public and private terminals), as needed.¹²²

63. On 19 July 1993, Mexico enacted the Ports Act (*Ley de Puertos*), which required that all port concessions be held by state-owned entities known as Integral Port Administrations (*Administraciones Portuarias Integrales* or “API”).¹²³ In 1994, pursuant to the Ports Act, the State of Quintana Roo and its municipalities created the Integral Port Administration of the State of Quintana Roo (*Administración Portuaria Integral de Quintana Roo, S.A. de C.V.* or “API Quintana Roo”).¹²⁴ The SCT granted API Quintana Roo a concession to operate all port facilities in the State of Quintana Roo except CALICA’s Port Terminal, which was grandfathered and remained under the CALICA Port Concession (the “API Quintana Roo Concession”).¹²⁵

64. The CALICA Port Concession runs through 20 April 2037 and can be extended for an additional 50 years.¹²⁶ It has been amended four times since it was issued in 1987.¹²⁷ Under the CALICA Port Concession, as amended, CALICA is entitled to operate the private and public

¹²¹ *Id.*, pp. 2-3 (C-0012-SPA). CALICA donated these six hectares of land to Mexico on 16 May 1991. As explained in Part II.C.2 above, Mexico requested that CALICA build a public terminal for ferries and passenger boats to connect Cozumel Island with continental Quintana Roo. Amendment to the Concession granted by the Federal Government through the SCT to CALICA, p. 3 (13 August 1993) (C-0013-SPA).

¹²² Concession granted by the Executive Branch through the SCT to CALICA, p. 2 (21 April 1987) (C-0012-SPA).

¹²³ Mexico Federal Official Gazette, Ports Act, p. 42 (19 July 1993) (C-0047-SPA).

¹²⁴ Quintana Roo Official Gazette, Decree creating API Quintana Roo, p. 2 (15 March 1994) (C-0048-SPA).

¹²⁵ Mexico Federal Official Gazette, API Quintana Roo Concession, p. 83 (26 August 1994) (C-0049-SPA). The API Quintana Roo Concession includes port facilities in Cozumel, Chetumal, Puerto Juarez, Puerto Morels, and Isla Mujeres.

¹²⁶ Article 23 of the Ports Act provides that port concessions may be granted for a term of up to 50 years and may be renewed for an additional term of 50 years. Mexico Federal Official Gazette, Ports Act, Article 23 (19 July 1993) (C-0047-SPA). Pursuant to the Fourth Amendment to the CALICA Port Concession, CALICA’s port concession runs through 20 April 2037. Clause 19 of the CALICA Port Concession, as amended, provides that the term of the concession may be renewed for a similar term, namely 50 years. Accordingly, CALICA can obtain a renewal of its port concession up to 2087. Amendment to the Concession granted by the Federal Government through the SCT to Calica, p. 16 (13 May 2015) (C-0016-SPA).

¹²⁷ Amendment to the Concession granted by the Federal Government through the SCT to CALICA (13 August 1993) (C-0013-SPA); Amendment to the Concession granted by the Federal Government through the SCT to CALICA (7 June 1994) (C-0014-SPA); Amendment to the Concession granted by the Federal Government through the SCT to CALICA (C-0015-SPA); and Amendment to the Concession granted by the Federal Government through the SCT to CALICA (13 May 2015) (C-0016-SPA).

terminals.¹²⁸ In exchange for undertaking the construction and operation of the public terminal, CALICA was allowed to charge fees to the vessels that dock there.¹²⁹ CALICA also undertook to pay concession fees to the SCT.¹³⁰ These concession fees are calculated based on an appraisal conducted every five years by the National Institute of Administration and Appraisals of National Assets (*Instituto de Administración y Avalúos de Bienes Nacionales* or “INDAABIN”).¹³¹

b) The Port Fees Litigation

65. In February 2003, at the request of API Quintana Roo and unbeknownst to CALICA, the SCT amended the API Quintana Roo Concession to include the terminals that CALICA had built and had been operating uninterruptedly since 1994 pursuant to the terms of its concession.¹³² The SCT also ordered CALICA to partially assign its rights over the public terminal to API Quintana Roo — effectively amending the CALICA Port Concession.¹³³

66. CALICA challenged these measures in Mexican court. On 5 July 2006, the court ruled that they were illegal and null.¹³⁴ On 25 June 2007, the SCT amended the API Quintana Roo Concession a second time, granting rights to API Quintana Roo over the areas in Punta Venado not including those concessioned to CALICA.¹³⁵ Yet, the following month, the SCT issued

¹²⁸ Amendment to the Concession granted by the Federal Government through the SCT to CALICA, pp. 1, 4, 9 (13 August 1993) (C-0013-SPA). As explained in Part II.F below, CALICA renounced its concessioned rights to the public terminal on 13 May 2015. Due to API Quintana Roo’s lack of compliance with Mexican legal, financial, and operational requirements, however, the SCT has asked CALICA to continue operating this terminal. Letter No. 7.3.1355.15 from Alejandro Hernández Cervantes (SCT) to [REDACTED] (CALICA) (22 May 2015) (C-0050-SPA).

¹²⁹ Amendment to the Concession granted by the Federal Government through the SCT to CALICA, p. 7 (13 August 1993) (C-0013-SPA).

¹³⁰ *Id.*, p. 8 (C-0013-SPA).

¹³¹ *Id.*

¹³² API Quintana Roo First Concession Amendment, p. 2, ¶ V (27 February 2003) (C-0051-SPA).

¹³³ Letter No. 500.0194 from Francisco J. Ávila Camberos (SCT) to Armando Real Rueda (CALICA) (3 March 2003) (C-0052-SPA) (“In this regard, you are required to demonstrate to this Ministry, within a period not exceeding 30 calendar days [...] that you have formalized with [API Quintana Roo] the contract for the partial assignment of rights that replaces the aforementioned concession title [...]”) (free translation, the original text reads: “Sobre el particular se le requiere para que, en un plazo que no exceda de 30 días naturales [...], acredite ante esta Secretaría haber formalizado con [API Quintana Roo] el contrato de cesión parcial de derechos que sustituya al título de concesión preindicado [...]”).

¹³⁴ Judgment of the Federal Administrative Tribunal, Case No. 9566/03-17-106/51/06-PL-09-04, p. 176 (5 July 2006) (C-0053-SPA).

¹³⁵ Mexico Federal Official Gazette, Second Amendment to the API Quintana Roo Concession Issued by SCT, pp. 43, 45 (25 June 2007) (C-0054-SPA).

official letters stating that, pursuant to this amended concession, API Quintana Roo had the right to collect port fees for vessels docking at the Punta Venado port terminals.¹³⁶

67. CALICA challenged this measure in court. To avoid further escalation, however, CALICA paid the port fees demanded by the SCT and API Quintana Roo *ad cautelam*, while the litigation was pending.¹³⁷ On 7 March 2012, the court determined that API Quintana Roo had no right to charge the port fees it had been collecting from CALICA since 2007 and that charging these fees contravened the CALICA Port Concession.¹³⁸ The court further held that the SCT's July 2007 letters were illegal and declared them null.¹³⁹ The SCT appealed, and, as explained in Part II.H.2 below, Mexico's Supreme Court ultimately affirmed this holding in 2017.

c) The Concession Fees Litigation and Revocation Proceeding

68. Under the CALICA Port Concession, CALICA's concession fees must be calculated based on an appraisal of the Punta Venado property value without taking into account any of CALICA's improvements or additions.¹⁴⁰ In May 2010, INDAABIN ignored this methodology and instead issued an appraisal that took into account all of CALICA's improvements and additions to the property, including the public terminal.¹⁴¹ The result was a much higher assessment for concession fees than the one allowed under the CALICA Port Concession.

¹³⁶ Letter No. API.DG.GJ.0405.07 from Javier F. Zetina González (State of Quintana Roo) to Oscar Amable Tenório (Agencia Consignataria del Sureste, S.A. de C.V.), p. 2 (4 July 2007) (C-0055-SPA); Letter No. API.DG.GJ.0405.07 from Javier F. Zetina González (State of Quintana Roo) to [REDACTED] (CALICA), p. 2 (9 July 2007) (C-0056-SPA); Letter No. 7.3.3033.07 from Ángel González Rul A. (SCT) to [REDACTED] (CALICA), p. 2 (24 July 2007) (C-0057-SPA); Letter No. 7.3.-1679.09.4257 from Alejandro Hernández Cervantes (SCT) to [REDACTED] (CALICA), p. 1 (2 July 2009) (C-0058-SPA).

¹³⁷ Between 2007 and 2017, CALICA paid approximately US\$18 million in port fees for the use of the private terminal. API Resumen 2007-2017 Spreadsheet, Tab "Resumen" (2020) (DC-0083-SPA).

¹³⁸ Decision of Mexico's Supreme Court, Claim 1256/2016, pp. 4-5 (25 January 2017) (C-0059-SPA) (describing how the 2012 decision found the official letters allowing API Quintana Roo to charge the Punta Venado port fees to be illegal and void).

¹³⁹ *Id.*, pp. 18-19 (C-0059-SPA) (rejecting a request for review of the lower court decisions).

¹⁴⁰ Amendment to the Concession granted by the Federal Government through the SCT to CALICA, pp. 1, 4, 9 (13 August 1993) (C-0013-SPA) ("Such appraisal shall only consider the property as originally granted, not including improvements and additions made during the concession.") (free translation, the original text reads: "Dicho avalúo únicamente considerará el inmueble como originalmente se concesionó, sin incluir las mejoras y adiciones que se hubieren efectuado durante la concesión.").

¹⁴¹ INDAABIN Appraisal, Generic No. G-40071-B, Sequential No. 06-10-0648, p. 28 (4 May 2010) (C-0060-SPA).

69. On 11 June 2010, the SCT demanded that CALICA pay concession fees based on INDAABIN's flawed appraisal.¹⁴² On 1 September 2010, CALICA challenged this appraisal and the SCT's demand in Mexican court.¹⁴³ While CALICA eventually prevailed,¹⁴⁴ on 7 May 2013, the SCT commenced an administrative proceeding to revoke the CALICA Port Concession, claiming that CALICA had failed to pay the increased concession fees.¹⁴⁵ To avoid the threatened revocation of the CALICA Port Concession, in June 2013, CALICA was forced to pay approximately US\$15 million in inflated concession fees.¹⁴⁶

2. Tax Issues Affecting the Project

70. CALICA pays federal, state, and municipal taxes, including real estate and extraction taxes. CALICA pays real estate taxes (*impuesto predial*) to the Municipality of Cozumel for La Rosita and Punta Venado and to the Municipality of Solidaridad for La Adelita and El Corchalito.¹⁴⁷ Under the laws of the Municipalities of Solidaridad and Cozumel, real estate taxes are calculated based on the area of the relevant lot, multiplied by a cadastral value set by each municipality, and taking into account factors such as the characteristics and the use of the land.¹⁴⁸

71. In 2011, the Municipality of Solidaridad increased the cadastral values applicable to La Adelita and El Corchalito by 3,000% and 1,000%, respectively.¹⁴⁹ CALICA filed several legal actions challenging these increases in local courts.¹⁵⁰

¹⁴² Letter No. 7.3.2327.010 from Alejandro Hernández Cervantes (SCT) to [REDACTED] (CALICA) (11 June 2010) (C-0061-SPA).

¹⁴³ CALICA's filing requesting annulment of INDAABIN valuation, Case No. 7.3.2327.010, p. 4 (1 September 2010) (C-0062-SPA).

¹⁴⁴ Judgment of the Federal Administrative Tribunal, Case No. 20699/10-17-08-9/130/12-PL-05-04 (10 February 2016) (C-0063-SPA).

¹⁴⁵ Letter from Alejandro Hernández Cervantes (SCT) to Jorge Mario Chabolla Márquez (CALICA) (7 May 2013) (C-0064-SPA).

¹⁴⁶ Letter from [REDACTED] (CALICA) to SCT (18 June 2013) (C-0065-SPA); Witness Statement-[REDACTED] Claimant's Memorial-ENG, ¶ 12.

¹⁴⁷ Witness Statement-[REDACTED]-Claimant's Memorial-ENG, ¶ 14, n.1.

¹⁴⁸ *Id.*

¹⁴⁹ Quintana Roo Official Gazette, Decree No. 031, pp. 2, 92 (29 November 2011) (C-0066-SPA).

¹⁵⁰ CALICA's annulment claim, Rancho Piedra Caliza S.A. de C.V. vs. Dirección de Cobranza y Fiscalización de la Tesorería Municipal de Solidaridad, Quintana Roo y otros, Quintana Roo's Court of Justice, Case No. 142/2013 (2 May 2013) (C-0067-SPA); CALICA's annulment claim, Rancho Piedra Caliza S.A. de C.V. vs. Dirección de Cobranza y Fiscalización de la Tesorería Municipal de Solidaridad, Quintana Roo y otros,

72. In 2007, the State of Quintana Roo adopted an extraction tax that has come to be known as the “CALICA Tax,” since it mainly targets CALICA’s quarrying operations. CALICA has filed several legal challenges to this tax.¹⁵¹

3. Issues Affecting Quarrying Activities in La Adelita

73. As noted above and contemplated in the Investment Agreement, Legacy Vulcan expanded the Project in 1996 by purchasing two lots: El Corchalito and La Adelita. Extraction activities above the water table in these lots are subject to state and municipal zoning and environmental regulation, and extraction activities below the water table are subject to federal regulation.¹⁵² On 19 April 1996, before these lots were purchased, the Ministry of Infrastructure, Environment, and Fisheries of the State of Quintana Roo confirmed to CALICA in writing that the land use of La Adelita and El Corchalito made quarrying operations there feasible under applicable local environmental regulations.¹⁵³ In June 1996, after CALICA received this confirmation, its subsidiary, RAPICA, purchased the lots and leased them to CALICA.¹⁵⁴ CALICA thereafter began the process of obtaining the required environmental impact authorizations to quarry those lots.

74. On 2 September 1996, the Municipality of Solidaridad confirmed that “it had no objection” to the quarrying operations that CALICA planned to undertake in El Corchalito and La Adelita.¹⁵⁵

Quintana Roo’s Court of Justice, Case No. 253/2013 (30 August 2013) (C-0068-SPA); CALICA’s annulment claim, Rancho Piedra Caliza S.A. de C.V. vs. Dirección de Catastro del Municipio de Solidaridad, Quintana Roo, Quintana Roo’s Court of Justice, Case No. 243/2013 (21 August 2013) (C-0069-SPA); CALICA’s annulment claim, Rancho Piedra Caliza S.A. de C.V. vs. Dirección de Catastro del Municipio de Solidaridad, Quintana Roo, Quintana Roo’s Court of Justice, Case No. 244/2013 (21 August 2013) (C-0070-SPA).

¹⁵¹ Witness Statement-[REDACTED]-Claimant’s Memorial-ENG, ¶ 13.

¹⁵² Expert Report-[REDACTED] Environmental-Claimant’s Memorial-SPA, ¶¶ 12-13.

¹⁵³ Letter No. SIMAP/792/996 from Sergio Pérez Perales (Ministry of Infrastructure, Environment and Fishery (*Secretaría de Infraestructura, Medio Ambiente y Pesca*) (“SIMAP”)) to [REDACTED] (CALICA), p. 1 (19 April 1996) (C-0071-SPA); Letter No. SIMAP/791/1996 from Sergio Pérez Perales (SIMAP) to Jorge E. Ortega Joaquín (CALICA), p. 1 (19 April 1996) (C-0072-SPA).

¹⁵⁴ La Adelita Title Deed (21 June 1996) (C-0035-SPA); El Corchalito Title Deed (28 August 1996) (C-0034-SPA).

¹⁵⁵ Letter from Rafael Ernesto Medina Rivero (Municipality of Solidaridad) to CALICA (2 September 1996) (C-0073-SPA).

75. On 11 December 1996, the State of Quintana Roo issued the State Environmental Impact Authorization, which allows CALICA to extract petrous materials above the water table (the “Corchalito/Adelita State Environmental Authorization”).¹⁵⁶ The State of Quintana Roo acknowledged CALICA’s quarrying operations in El Corchalito and La Adelita as the “Expansion of the Quarrying Zone Property of CALICA.”¹⁵⁷ The State of Quintana Roo renewed and/or amended the Corchalito/Adelita State Environmental Authorization in 2006, 2011, and 2016.¹⁵⁸ This authorization is valid until 2036 and can be further renewed.¹⁵⁹

76. On 30 November 2000, Mexico’s Federal Government, through SEMARNAT, granted CALICA the Federal Environmental Impact Authorization, which gives CALICA the right to quarry El Corchalito and La Adelita below the water table (the “Corchalito/Adelita Federal Environmental Authorization”).¹⁶⁰ This authorization acknowledges that “the Project [] is not located within federal or state natural protected areas [...] [and that] it would not cause environmental impacts that cannot be mitigated and/or for which [CALICA] cannot provide compensation.”¹⁶¹ The Corchalito/Adelita Federal Environmental Authorization is valid for 20 years, until 1 December 2020, and may be extended for an additional 22 years through a simple request.¹⁶²

¹⁵⁶ Corchalito/Adelita State Environmental Authorization, pp. 2, 4 (11 December 1996) (C-0018-SPA).

¹⁵⁷ *Id.*, p. 1 (C-0018-SPA).

¹⁵⁸ First Amendment to the Corchalito/Adelita State Environmental Authorization (3 March 2006) (C-0073-SPA); Second Amendment to the Corchalito/Adelita State Environmental Authorization (19 May 2011) (C-0075-SPA); Third Amendment to the Corchalito/Adelita State Environmental Authorization (8 March 2016) (C-0076-SPA).

¹⁵⁹ Expert Report- [REDACTED] Environmental-Claimant’s Memorial-SPA, ¶ 83.

¹⁶⁰ Corchalito/Adelita Federal Environmental Authorization, p. 9 (30 November 2000) (C-0017-SPA).

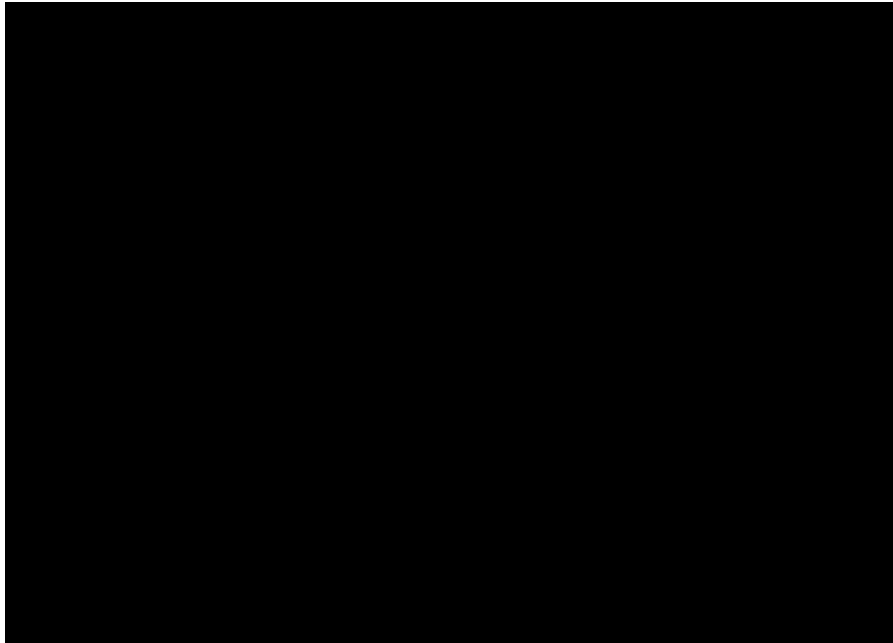
¹⁶¹ Corchalito/Adelita Federal Environmental Authorization, pp. 4, 8 (30 November 2000) (C-0017-SPA) (“[T]he project ‘Extraction of Limestone Rock below the Water Table in the El Corchalito and La Adelita properties in Solidaridad, Quintana Roo,’ is not located within any federal or state protected natural area [...] [and] will not cause environmental impacts that cannot be mitigated and/or compensated.”) (free translation, the original text reads: “[E]l proyecto ‘Aprovechamiento de Roca Caliza por Debajo del Manto Freático en los Predios El Corchalito y La Adelita en Solidaridad, Quintana Roo,’ no se encuentra dentro de algún área natural protegida de carácter federal o estatal [...] [y] no provocará impactos ambientales que no puedan ser mitigados y/o compensados.”).

¹⁶² CALICA’s Environmental Impact Statement, Chapter II, p. 15 (23 October 2000) (C-0077-SPA); Corchalito/Adelita Federal Environmental Authorization, p. 13 (30 November 2000) (C-0017-SPA); Expert Report- [REDACTED] Environmental-Claimant’s Memorial-SPA, ¶¶ 248-249 (explaining that under the Federal EIA, renewal would be granted upon the simple filing of a written request 30 days before the end of the term, and a review of CALICA’s latest quadrimester report. A new environmental assessment would not be necessary).

77. In 2001, CALICA began to quarry El Corchalito, which is closer to the processing plant than La Adelita.¹⁶³ For this reason, quarrying in La Adelita was postponed to a later date, corresponding to the most efficient extraction of materials in CALICA's lots.¹⁶⁴

78. El Corchalito and La Adelita are subject to the zoning regime of the State of Quintana Roo. From 2001 to 2009, this regime was known as the Program for Territorial Environmental Regulation (*Programa de Ordenamiento Ecológico Territorial* or "POET").¹⁶⁵ The POET assigned zoning categories known as Environmental Management Units (*Unidad de Gestión Ambiental* or "UGA") to different areas of Quintana Roo's municipalities, including Solidaridad and Cozumel. The POET zoned La Rosita and Punta Venado as UGA 19, which allows quarrying,¹⁶⁶ and El Corchalito and La Adelita as UGA 30, which allows quarrying under certain conditions.¹⁶⁷

Map 2 — [REDACTED]



¹⁶³ Witness Statement-[REDACTED]-Claimant's Memorial-ENG, ¶ 24.

¹⁶⁴ *Id.*

¹⁶⁵ Expert Report-[REDACTED] Environmental-Claimant's Memorial-SPA, ¶¶ 34-36; POET (16 November 2001) (C-0078-SPA).

¹⁶⁶ POET, p. 12 (16 November 2001) (C-0078-SPA).

¹⁶⁷ *Id.*, p. 15-16 (C-0078-SPA); Expert Report-[REDACTED]-Environmental-Claimant's Memorial-SPA, ¶¶ 35, 43. Under UGA 30, CALICA was required to preserve 20% of the vegetation of El Corchalito and La Adelita. POET, pp. 15, 26 (16 November 2001) (C-0078-SPA).

79. Consistent with the POET, the State of Quintana Roo and the Municipality of Solidaridad confirmed that quarrying El Corchalito and La Adelita was allowed. For example, on 3 March 2006, the State of Quintana Roo extended the Corchalito/Adelita State Environmental Authorization until 2011, noting that quarrying those lots was “feasible under the State of Quintana Roo’s policy of exploitation and mining of (UGA 19), as well as mining, on a conditional basis, of (UGA 30).”¹⁶⁸ Similarly, on 2 October 2007, the Municipality of Solidaridad confirmed that CALICA was allowed to “extract[] [...] petrous material” in El Corchalito and La Adelita.¹⁶⁹

80. On 25 May 2009, the State of Quintana Roo replaced the POET with the Program for Local Environmental Regulation (*Programa de Ordenamiento Ecológico Local* or “POEL”), a new zoning regime for the Municipality of Solidaridad.¹⁷⁰ Under the POEL, which is still in effect, the State of Quintana Roo zoned most of La Adelita as UGA 5, a zoning designation that prohibits quarrying and is intended for conservation.¹⁷¹ The POEL recognizes, however, that it does “not apply retroactively in those specific cases in which authorizations currently in force had been obtained before its enactment [...] nor with regard to their future renewal [...] [and that] it recognize[s] and respect[s] [...] vested rights.”¹⁷²

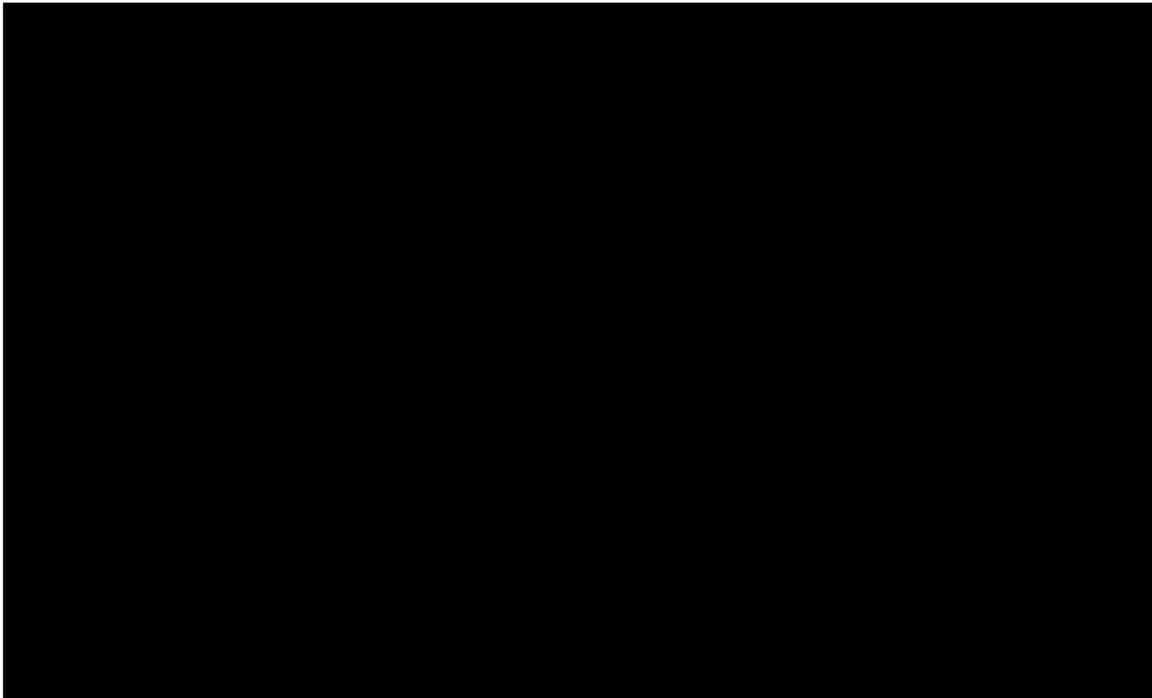
¹⁶⁸ First Amendment to the Corchalito/Adelita State Environmental Authorization, p. 2 (3 March 2006) (C-0074-SPA) (free translation, the original text reads: “el aprovechamiento de los materiales pétreos en dichos predios es factible de acuerdo a la política de Aprovechamiento y uso predominante para la minería de la (UGA 19), así como al uso condicionado para la minería de la (UGA 30) [.]”).

¹⁶⁹ Land Use License (2 October 2007) (C-0079-SPA) (“Authorized land use: extraction of petrous material[.]”) (free translation, the original text reads: “Uso de suelo autorizado: aprovechamiento de material pétreo[.]”); Expert Report- [REDACTED]-Environmental-Claimant’s Memorial-SPA, ¶ 59-60.

¹⁷⁰ POEL (25 May 2009) (C-0080-SPA). Under Transitory Article 3 of the POEL, the State of Quintana Roo abrogated the POET only in respect of the Municipality of Solidaridad. *Id.*

¹⁷¹ *Id.*, p. 62. The POEL applied to El Corchalito from 2009-2011. Since 2011, the zoning in El Corchalito has been subject to the Urban Development Program of Solidaridad of 2010, which does not preclude quarrying activities in that lot. Solidaridad Municipal Program of Urban Development 2010-2050, p. III-27 (2010) (C-0081-SPA).

¹⁷² POEL, Section 2.6 (25 May 2009) (C-0080-SPA) (“[It] shall not apply retroactively to concrete cases, which have official documents in force before its entry into force [...] nor in respect of their future renewal [...] [and] [...] it recognizes and respects [...] acquired rights [...]”) (free translation, the original text reads: “no se aplicará retroactivamente a los casos en concreto, que cuenten con documentos oficiales y vigentes hasta antes de su entrada en vigor [...] ni en lo que toca a la futura renovación de los mismos [...] [y] [s]e reconocen y respetan [...] los derechos adquiridos [...]”). In addition, Transitory Article 5 of the POEL provides that “[t]he applications initiated prior to the entry into force of the [POEL] will be resolved in accordance with the relevant legislation in force at the time of their filing, so [the POEL] will not apply retroactively in those specific cases where official and valid documents had been issued before its entry into force, either generally or in the renewal thereof.” POEL, p. 6 (25 May 2009) (C-0080-SPA) (free translation, the original text reads: “Los trámites iniciados con anterioridad a la entrada en vigor del presente Decreto, se resolverán conforme a la legislación vigente en la materia al momento de su inicio, por lo que no aplicará

Map 3 — [REDACTED] ¹⁷³

81. On 15 June 2009, CALICA commenced a legal action against the State of Quintana Roo and the Municipality of Solidaridad to seek certainty that its vested rights to quarry La Adelita remained unaffected by the POEL.¹⁷⁴ The State and Municipality confirmed that the POEL did not affect CALICA's vested rights to quarry La Adelita. For example, the Secretary of Urban Development and Environment of the State of Quintana Roo represented to the court that the POEL did not affect CALICA's vested rights to quarry La Adelita because the POEL:

“establishes [...] an exception to the rights of those [...] who have acquired or obtained authorizations, submitted applications or requested renewals thereof prior to the entry into force of the said program (POEL [...]), [and] likewise it was established therein that it would not be applied retroactively in those cases that have or had

retroactivamente a los casos en concreto que cuenten con documentos oficiales y vigentes hasta antes de su entrada en vigor, ni en lo general ni en lo que toca a la futura renovación de los mismos.”).

¹⁷³ Because La Rosita and Punta Venado are located within the Municipality of Cozumel, the POEL — a Municipality of Solidaridad zoning instrument — is inapplicable to those lots.

¹⁷⁴ CALICA's Legal Action Against the POEL, p. 31 (15 June 2009) (C-0082-SPA). This action was filed before the Constitutional and Administrative Chamber of the High Court of Justice of the State of Quintana Roo (*Sala Constitucional y Administrativa del Tribunal Superior de Justicia del Estado de Quintana Roo*).

authorizations [...] which would be recognized and respected [...] because they are considered vested rights.”¹⁷⁵

82. Similarly, the Undersecretary for Legal Affairs of the State of Quintana Roo represented to the court that the POEL “does not affect [CALICA’s] vested rights” to quarry La Adelita.¹⁷⁶ The Municipality of Solidaridad echoed these statements, confirming that the POEL “does not affect [CALICA’s] vested rights” to quarry La Adelita.¹⁷⁷ Consistent with these representations, on 1 September 2009, the Director General for Environmental and Urban Development of the Municipality of Solidaridad informed CALICA that “CALICA will continue to fully use, enjoy, and exercise each and every one of the rights that [its authorizations] establish, as the [POEL] does not apply to them retroactively.”¹⁷⁸

¹⁷⁵ Answer from the Secretary of Urban Development and Environment of the State of Quintana Roo to CALICA’s Legal Action Against the POEL, p. 5 (8 July 2009) (C-0083-SPA) (free translation, the original text reads: “establece [...] salvedad para todos aquellos sujetos de derecho que hayan adquirido u obtenido licencias, iniciado trámites o solicitado la renovación de los mismos antes de la vigencia del referido programa (POEL de SOLIDARIDAD), asimismo se estableció en el cuerpo del referido decreto que no sería aplicable retroactivamente a los casos particulares que cuenten o que contaren con autorizaciones documentos vigentes o renovaciones de los mismos los cuales se reconocerían y respetarían por el decreto motivo de la presente demanda, en virtud de que se toman como derecho adquiridos, respetando los mismos bajo un contexto de estricto control constitucional e irretroactividad de la Ley o acto de autoridad.”).

¹⁷⁶ Answer from the Quintana Roo Undersecretary for Legal Affairs to CALICA’s Legal Action Against the POEL, p. 3 (13 July 2009) (C-0084-SPA) (“The rights acquired by [CALICA] prior to the approval and publication of the Local Ecological Management Program of the Municipality of Solidaridad were not affected.”) (free translation, the original text reads: “[a CALICA] no se le afectaron sus derechos adquiridos con anterioridad a la aprobación y publicación del Programa de Ordenamiento Ecológico Local del Municipio de Solidaridad.”).

¹⁷⁷ Answer from the Municipality of Solidaridad to CALICA’s Legal Action Against the POEL, p. 4 (10 July 2009) (C-0085-SPA) (“[Solidaridad] has not invalidated the permits previously applied for by the companies involved in this action for annulment, nor has it refused to issue the renewals referred to, so that the legal interests of the plaintiff are not affected, likewise, no act of authority has been carried out that would violate the interests of the company that is the subject of this lawsuit, since the [POEL] was prepared in strict compliance with the law and did not violate the constitutional guarantee enshrined in Article 14 of the Political Constitution of the United Mexican States.”) (free translation, the original text reads: “[Solidaridad] no ha dejado invalidado los permisos que anteriormente ya se hubieren solicitado por las empresas accionantes en la presente demanda de nulidad, ni tampoco se ha negado para la expedición de las renovaciones a que hace alusión, de manera que no afecta los intereses jurídicos de la parte actora, asimismo no se ha ejecutado algún acto de autoridad del cual sea motivo de violación para los intereses de la empresa objeto de la presente demanda, toda vez que [el POEL], fue elaborado con estricto apego a derecho no violentándose la garantía constitucional consagrada en el artículo 14 de la Constitución Política de los Estados Unidos Mexicanos.”).

¹⁷⁸ Letter from José Alonso Durán Rodríguez (Municipality of Solidaridad) to [REDACTED] (CALICA), p. 3 (1 September 2009) (C-0086-SPA) (“[CALICA] will continue in full use, enjoyment and exercise of each and every one of the rights that [its authorizations] protect, since the [POEL] is not applicable to it retroactively.”) (free translation, the original text reads: “[CALICA] continuará en pleno uso,

83. In March 2010, given the representations made by the State of Quintana Roo and the Municipality of Solidaridad, the High Court of Justice of the State of Quintana Roo concluded that the POEL does not affect CALICA's permits to quarry La Adelita and El Corchalito or their renewal. Consequently, it dismissed the action.¹⁷⁹

84. On 19 May 2011, consistent with this ruling and two years after the POEL had been enacted, the State of Quintana Roo renewed the Corchalito/Adelita State Environmental Authorization, recognizing that the lots continue to be regulated by the zoning in the POET:

“the lots called El Corchalito [and] La Adelita [...] are regulated by Environmental Management Units nineteen and thirty (UGA 19 and 30) of the [POET] [...] and, therefore [...] the exploitation of petrous materials in these lots is feasible according to the policy of exploitation and predominant use for mining [established by] (UGA 19), as well as to the determination to allow mining on a conditional basis by (UGA 30).”¹⁸⁰

85. On 14 April 2013, [REDACTED] met with SEMARNAT's General Director of Forest and Soil Management, Francisco García, to discuss CALICA's plans [REDACTED], among other topics.¹⁸¹ García stated that, in addition to the multiple permits that it had already secured, CALICA would need to obtain an Authorization for Soil-Use Change in Forested Terrains (*Autorización de Cambio de Uso del Suelo en Terrenos Forestales* or “CUSTF”) to remove vegetation from La Adelita.¹⁸² García added that, even though the POEL recognized

goce y ejercicio de todos y cada uno de los derechos que [sus autorizaciones] amparan, al no serles aplicables de manera retroactiva el [POEL].”).

¹⁷⁹ Decision of the High Court of Justice of the State of Quintana Roo, pp. 3-4 (25 March 2010) (C-0087-SPA) (“It should be noted that the grounds for the dismissal amount to the point that the interests of the plaintiff are not affected, since the Local Ecological Management Program does not apply to it”) (free translation, the original text reads: “Es de apreciarse que la causal de improcedencia hecha valer converge en la cuestión relativa a que no se afectan los intereses de la parte actora, al no serle aplicable el Programa de Ordenamiento Ecológico Local”).

¹⁸⁰ Second Amendment to the Corchalito/Adelita State Environmental Authorization, p. 4 (19 May 2011) (C-0075-SPA) (free translation, the original text reads: “los predios denominados El Corchalito, [y] La Adelita [...] se encuentran regulados por las Unidades de Gestión Ambiental diecinueve y treinta (UGA 19 y 30) del [POET] [...] por lo que se determina que el aprovechamiento de los materiales pétreos en dichos predios es factible de acuerdo a la política de Aprovechamiento y uso predominante para la minería de la (UGA 19), así como al uso condicionado para la Minería de la (UGA 30).”).

¹⁸¹ Witness Statement-[REDACTED]-Claimant's Memorial-ENG, ¶ 25.

¹⁸² *Id.*

CALICA's vested rights to quarry that lot, an amendment of the POEL expressly allowing quarrying activities would be required for SEMARNAT to issue the CUSTF for La Adelita.¹⁸³

86. Based on SEMARNAT's asserted position that it would not authorize the clearing of vegetation in La Adelita necessary for CALICA to exercise its vested quarrying rights unless the POEL was amended, [REDACTED].¹⁸⁴

F. THE 2014 AGREEMENTS

87. In May 2013, faced with a court ruling confirming that the port fees charged by API Quintana Roo were unlawful,¹⁸⁵ then-Governor of the State of Quintana Roo Roberto Borge contacted CALICA to negotiate a comprehensive agreement to resolve this and related issues.¹⁸⁶ CALICA agreed to negotiate, and discussions ensued. Mexico designated the SCT to lead these discussions. The State of Quintana Roo, API Quintana Roo, and the Municipality of Solidaridad actively participated as well.¹⁸⁷

88. On 12 June 2014, after months of negotiations,¹⁸⁸ CALICA, the SCT, the State of Quintana Roo, API Quintana Roo, and the Municipality of Solidaridad entered into a comprehensive agreement reflected in two legally binding instruments: the Total Regularization Scheme and the Memorandum of Understanding (the "MOU"), which was amended on 13 May 2015 (the "Amended MOU") (collectively, the "2014 Agreements").¹⁸⁹ The interdependence of these agreements was reflected in both instruments as follows:

"The signing and enforcement of the MOU is the determining reason why CALICA agreed to the terms and conditions

"The signing and enforcement by the SCT of the Total Regularization Scheme is the determining reason why CALICA signed this Memorandum of Understanding."¹⁹¹

¹⁸³ *Id.*; see also Expert Report-[REDACTED]-Environmental-Claimant's Memorial-ENG, ¶¶ 111-117 (confirming that SEMARNAT would not issue the CUSTF unless quarrying activities were expressly authorized in the zoning specified in the POEL).

¹⁸⁴ Witness Statement-[REDACTED]-Claimant's Memorial-ENG, ¶ 25.

¹⁸⁵ See *supra* ¶ 67.

¹⁸⁶ Witness Statement-[REDACTED]-Claimant's Memorial-ENG, ¶ 15.

¹⁸⁷ *Id.*

¹⁸⁸ *Id.*, ¶¶ 15-26 (describing negotiations).

¹⁸⁹ Total Regularization Scheme entered into between the SCT and CALICA (12 June 2014) (C-0020-SPA); MOU (12 June 2014) (C-0021-SPA); Amended MOU (13 May 2014) (C-0022-SPA).

¹⁹¹ MOU, p. 1 (12 June 2014) (C-0021-SPA) (free translation, the original text reads: "La ejecución y cumplimiento por parte de la SCT del ESQUEMA DE REGULARIZACIÓN TOTAL es el motivo determinante de la voluntad para que CALICA celebre este Memorandum de Entendimiento").

included in the Total Regularization Scheme.”¹⁹⁰

89. CALICA relinquished valuable rights and assets in the 2014 Agreements and, as explained in Part II.G below, Legacy Vulcan made substantial additional investments in reliance on the obligations assumed by Mexico and its instrumentalities in those agreements.

1. The Total Regularization Scheme

90. Under the Total Regularization Scheme, CALICA and the SCT — with API Quintana Roo as a witness — agreed to resolve all issues relating to the Port Terminal in two stages.¹⁹²

91. *First*, CALICA agreed to pay the allegedly outstanding concession fees that had triggered the SCT’s 2013 proceeding to revoke the CALICA Port Concession, and the SCT agreed to discontinue that proceeding.¹⁹³ CALICA also undertook to continue paying concession fees in accordance with INDAABIN’s calculations and agreed not to challenge fees based on these calculations.¹⁹⁴

92. *Second*, the SCT agreed to extend the term of the CALICA Port Concession for an additional 13 years, until 2037.¹⁹⁵ CALICA agreed to give up its concessioned rights to the public terminal subject to, *inter alia*, the amendment of the POEL.¹⁹⁶ The SCT also agreed to modify the API Quintana Roo Concession to clarify the port areas that belonged exclusively to API Quintana Roo or to CALICA, and the areas that could be used by both.¹⁹⁷ The SCT also agreed to assist

¹⁹⁰ Total Regularization Scheme entered into between the SCT and CALICA, p. 3 (12 June 2014) (C-0020-SPA) (free translation, the original text reads: “La celebración y cumplimiento del MOU es motivo determinante de la voluntad para que CALICA celebre los términos y condiciones de este ESQUEMA DE REGULARIZACIÓN TOTAL.”).

¹⁹² Total Regularization Scheme entered into between the SCT and CALICA, p. 4 (12 June 2014) (C-0020-SPA).

¹⁹³ *Id.* (C-0020-SPA).

¹⁹⁴ *Id.* (C-0020-SPA).

¹⁹⁵ *Id.*, pp. 4-5 (C-0020-SPA).

¹⁹⁶ *Id.* (C-0020-SPA).

¹⁹⁷ *Id.* (C-0020-SPA) (“Likewise, the SCT [...] in order for [API Quintana Roo] and CALICA to have greater certainty regarding the areas that correspond to each one, will proceed to modify the integral concession granted to [API Quintana Roo].”) (free translation, the original text reads: “Asimismo, la SCT [...] a fin de que [API Quintana Roo] y CALICA tengan mayor certeza respecto a las áreas que a cada una les corresponden, procederá a modificar la concesión integral otorgada a [API Quintana Roo].”).

INDAABIN in conducting an appraisal of the Port Terminal in accordance with the CALICA Port Concession to calculate CALICA's concession fees.¹⁹⁸ The SCT and CALICA further agreed that the SCT's modification of the API Quintana Roo Concession and the CALICA Port Concession would replace the official letters that the SCT had issued in July 2007 purporting to grant API Quintana Roo the right to collect port fees from CALICA for its use of the private terminal.¹⁹⁹

2. The Memorandum of Understanding

93. Under the MOU, CALICA, the State of Quintana Roo, API Quintana Roo, and the Municipality of Solidaridad — with the SCT as a witness — agreed to address CALICA's ability to commence operations in La Adelita, among other issues.²⁰⁰ The parties' obligations under the MOU were conditioned on the SCT's extension of CALICA's concession over the private terminal until 2037, as set forth in the Total Regularization Scheme.²⁰¹

94. Under the MOU, the State of Quintana Roo and the Municipality of Solidaridad agreed to “take the necessary actions before municipal authorities [...] to promote the execution of the corporate and business purposes of CALICA,” including “revis[ing] the [POEL] to arrange [...] for the inclusion of ‘mining and exploitation of petrous material’ at [...] ‘La Adelita.’”²⁰² The

¹⁹⁸ *Id.*, p. 6 (C-0020-SPA).

¹⁹⁹ *Id.*, pp. 5-6 (C-0020-SPA).

²⁰⁰ MOU (12 June 2014) (C-0021-SPA).

²⁰¹ *Id.*, p. 1 (C-0021-SPA).

²⁰² *Id.*, p. 3 (C-0021-SPA) (“3. To carry out the necessary actions before the municipal or state authorities, in accordance with the legislation in force, tending to promote the execution of the corporate and business purpose of CALICA and/or affiliates in the Private Use Terminal, consisting of the following: a) Solidaridad's Local Ecological Management Program (“POEL”). The Municipality of Solidaridad and the Secretary of Ecology will revise the POEL for the Municipality of Solidaridad in order to arrange with the technical and executive bodies for the incorporation of the ‘Use of Mining and/or exploitation of stone material’ regarding the properties owned and/or possessed by CALICA and/or its affiliates, known as ‘LA ROSITA’, ‘EL CORCHALITO’, and ‘LA ADELITA’.”) (free translation, the original text reads: “3. Llevar a cabo las acciones necesarias ante las autoridades municipales o estatales, conforme a la legislación vigente, tendientes a promover la ejecución del objeto social y de negocios de CALICA y/o afiliadas en la Terminal de Uso Particular, consistentes en lo siguiente: a) Programa de Ordenamiento Ecológico Local (“POEL”) de Solidaridad.- El Municipio de Solidaridad y la Secretaría de Ecología, revisarán el POEL para el Municipio de Solidaridad para gestionar ante los órganos técnico y ejecutivo la incorporación del ‘Uso de Minería y/o explotación de material pétreo’ con respecto a los inmuebles propiedad y/o posesión de CALICA y/o afiliadas, conocidas como ‘LA ROSITA’, ‘EL CORCHALITO’, y ‘LA ADELITA.’”).

State of Quintana Roo and the Municipality of Solidaridad agreed to amend the POEL within two to four months once this process began.²⁰³

95. The State of Quintana Roo also agreed to issue a new or modified environmental impact authorization to increase the annual quarrying area in La Adelita and El Corchalito from 25 hectares to 50 hectares and to extend the term of that authorization for another 20 years, until 2036.²⁰⁴ In addition, the Municipality of Solidaridad agreed to modify the cadastral values used to calculate the real estate taxes applicable to La Adelita and El Corchalito.²⁰⁵

96. If the State of Quintana Roo and the Municipality of Solidaridad complied with these and other obligations under the MOU, CALICA agreed to, *inter alia*, withdraw all outstanding legal challenges against their measures and renounce its concessioned rights over the public terminal in Mexico's favor.²⁰⁶

97. By early 2015, the Municipality of Solidaridad and the State of Quintana Roo had yet to amend the POEL and the SCT had not published the extension of the CALICA Port Concession's term.²⁰⁷ When CALICA inquired about the status of the performance of these obligations, the SCT imposed a new condition: that CALICA relinquish its concessioned rights over the public terminal in Mexico's favor immediately — not after the amendment of the POEL, as had been originally agreed.²⁰⁸ Mexico's new demand led to a renegotiation of the MOU.²⁰⁹

98. On 13 May 2015, the parties to the MOU amended that agreement (the "Amended MOU"). Under the Amended MOU, CALICA accepted the new condition imposed by the SCT. It renounced its concessioned rights to the public terminal at the Punta Venado port effective

²⁰³ *Id.*, p. 3 (C-0021-SPA).

²⁰⁴ *Id.* (C-0021-SPA).

²⁰⁵ *Id.*, p. 4 (C-0021-SPA)

[REDACTED]

Id., pp. 2-3 (C-0021-SPA).

²⁰⁶ *Id.*, p. 5 (C-0021-SPA); Witness Statement-[REDACTED]-Claimant's Memorial-ENG, ¶ 29 ("In return, CALICA undertook to withdraw its challenges to the CALICA Tax and to the increased cadastral values that the Municipality of Solidaridad had imposed on Legacy Vulcan's properties.").

²⁰⁷ Witness Statement-[REDACTED]-Claimant's Memorial-ENG, ¶ 34.

²⁰⁸ *Id.*

²⁰⁹ *Id.*

immediately.²¹⁰ On the same day, the SCT extended CALICA's concession over the private terminal until 2037.²¹¹

99. In the Amended MOU, the State of Quintana Roo and the Municipality of Solidaridad confirmed their obligation to amend the POEL to explicitly "recognize" CALICA's ability to quarry La Adelita.²¹² Because more than the four months envisioned in the MOU had elapsed without the promised amendment to the POEL, the State and the Municipality agreed to complete the amendment process by 5 December 2015.²¹³ They also set forth specific phases for the POEL amendment process and established deadlines for each.²¹⁴ In exchange for this precise timeline, CALICA agreed to cover certain reforestation costs and to pay certain contested real estate taxes to the Municipality of Solidaridad under a schedule tied to each completed phase.²¹⁵

100. Under the timeline specified by the Amended MOU, the State of Quintana Roo and the Municipality of Solidaridad were required to have established a committee to amend the POEL by no later than 29 May 2015.²¹⁶ In exchange, CALICA agreed to pay the Municipality of Solidaridad MXN\$3,572,497.98 (US\$234,025.84) in reforestation costs.²¹⁷

101. The Committee to Amend the POEL would then amend the POEL by 12 October 2015 through a process consisting of four phases: "Characterization," "Diagnosis," "Forecast," and

²¹⁰ *Id.*, ¶ 35.

²¹¹ *Id.*

²¹² Amended MOU, p. 2 (13 May 2015) (C-0022-SPA) ("The Municipality of Solidaridad and the Government of the State of Quintana Roo, through the SEMA, will establish the Local Ecological Management Committee for the Updating of the POEL [...] so that this updating recognizes the use of mining and exploitation of petrous material in the properties owned and/or possessed by CALICA and/or its affiliates, known as 'La Rosita,' 'El Corchalito' and 'La Adelita.'") (free translation, the original text reads: "El Municipio de Solidaridad y el Gobierno del Estado de Quintana Roo, a través de la SEMA, instalarán el Comité de Ordenamiento Ecológico Local para la Actualización del POEL [...] para que en esta actualización se reconozca el uso de minería y explotación de material pétreo en los inmuebles propiedad y/o en posesión de CALICA y/o afiliadas, conocidos como 'La Rosita,' 'El Corchalito' y 'La Adelita.'").

²¹³ *Id.*, p. 4 (13 May 2015) (C-0022-SPA) ("By December 5, 2015, the updated POEL of the Municipality of Solidaridad must be published in the Official Newspaper of the State of Quintana Roo") (free translation, the original text reads: "A más tardar el 5 de Diciembre de 2015 deberá publicarse en el Periódico Oficial del Estado de Quintana Roo el POEL actualizado del Municipio de Solidaridad.").

²¹⁴ *Id.*, pp. 3-4 (C-0022-SPA).

²¹⁵ *Id.* (C-0022-SPA).

²¹⁶ *Id.*, p. 3 (C-0022-SPA). A Committee to Amend the POEL had been formed the previous year and continued operating as such during the period set forth in the Amended MOU.

²¹⁷ *Id.* (C-0022-SPA).

“Modeling.”²¹⁸ Before the first two phases, CALICA would pay the Municipality of Solidaridad MXN\$3,036,249 (US\$198,897.44), plus any outstanding amounts and interests, in contested municipal real estate taxes for the first three bimesters of fiscal year (“FY”) 2013.²¹⁹

102. Once the Committee proposed the text of the amended POEL, the State of Quintana Roo and the Municipality of Solidaridad undertook to begin a two-week, non-binding public consultation period on 14 October 2015.²²⁰ On that day, CALICA promised to pay the Municipality of Solidaridad MXN\$3,036,249 (US\$198,897.44), plus any outstanding amounts and interests, in contested municipal real estate taxes for the last three bimesters of FY 2013.²²¹

103. Following public consultation, the Amended MOU established that the Committee to Amend the POEL would approve the proposed revised POEL on 11 November 2015.²²² After that, the Municipality of Solidaridad would send the approved version of the amended POEL to the Municipality of Solidaridad’s City Council for review and approval.²²³

104. Finally, once the municipal City Council approved the amended POEL, the State of Quintana Roo agreed to publish it in the state’s Official Gazette by no later than 5 December 2015. The day after the amended POEL’s publication, CALICA would pay the Municipality of Solidaridad MXN\$6,072,498 (US\$397,794.88), plus any outstanding amounts and interests, in contested real estate taxes for FY 2014.²²⁴ As explained in Part II.H.1 below, the municipal and state governments repudiated their obligations under the Amended MOU.

G. LEGACY VULCAN’S ADDITIONAL INVESTMENTS IN RELIANCE ON RESPONDENT’S OBLIGATIONS IN THE 2014 AGREEMENTS

105. For Legacy Vulcan, the 2014 Agreements represented a new chapter in its relationship with Mexico. In reliance on the obligations assumed by Mexico and its instrumentalities in the 2014 Agreements and the initial steps they took pursuant to those

²¹⁸ *Id.* (C-0022-SPA). See also Expert Report- [REDACTED] -Environmental-Claimant’s Memorial-ENG, ¶ 25 (explaining the phases for the amendment of the POEL).

²¹⁹ Amended MOU, p. 3 (13 May 2015) (C-0022-SPA).

²²⁰ *Id.* (C-0022-SPA).

²²¹ *Id.* (C-0022-SPA).

²²² *Id.*, p. 4 (C-0022-SPA).

²²³ *Id.* (C-0022-SPA).

²²⁴ *Id.* (C-0022-SPA).

agreements, between June 2014 and December 2017, Legacy Vulcan authorized additional investments in the Project worth approximately [REDACTED] and made corresponding capital expenditures of more than [REDACTED] up to 2019, as detailed in Table 2 below.²²⁵

106. For example, in July 2014, as set out in Table 2 below, the VMC Board of Directors authorized a [REDACTED] investment by Legacy Vulcan to commission the construction of two custom-built, state-of-the-art bulk carrier Panamax vessels designed to meet specifications unique to CALICA's operations.²²⁶ This investment was made because CALICA had signed:

“a memorandum of understanding with the [Mexican] local, state and federal government, which provides:

1. Extension of the term of the Concession to 2037 for Calica's exclusive use of the private terminal for aggregates shipments[.]
[...]
6. Extension of the current state mining permit from a term of five (5) years to twenty (20) years and doubling of the acreage allowed to be mined annually.
7. Zoning of all Calica properties for the extraction of limestone.”²²⁷

107. Construction of the vessels began shortly thereafter, and Legacy Vulcan took delivery of them in 2018.²²⁸ Christened M/V Donald M. James and M/V Ireland, these vessels have served CALICA's operations since they were delivered.²²⁹ Each vessel is approximately 229 meters long and 33 meters wide.²³⁰ Each boasts seven cargo holds with a total carrying capacity of roughly 70,000 tons.²³¹ They are environmentally friendly, self-unloading, and energy efficient.²³² These vessels were commissioned to serve Legacy Vulcan's Mexican operations.²³³

²²⁵ Witness Statement-[REDACTED]-Claimant's Memorial-ENG, ¶ 32; Witness Statement-[REDACTED]-Claimant's Memorial-ENG, ¶ 54.

²²⁶ Memorandum for Meeting of the Board of Directors, pp. 1-2 (11 July 2014) (C-0088-ENG).

²²⁷ *Id.* (C-0088-ENG).

²²⁸ Witness Statement-[REDACTED]-Claimant's Memorial-ENG, ¶ 53.

²²⁹ *Id.*

²³⁰ *Id.*

²³¹ *Id.*

²³² *Id.*

²³³ *Id.*, ¶¶ 53, 57.

Picture 14 - The M/V Donald M. James at Punta Venado



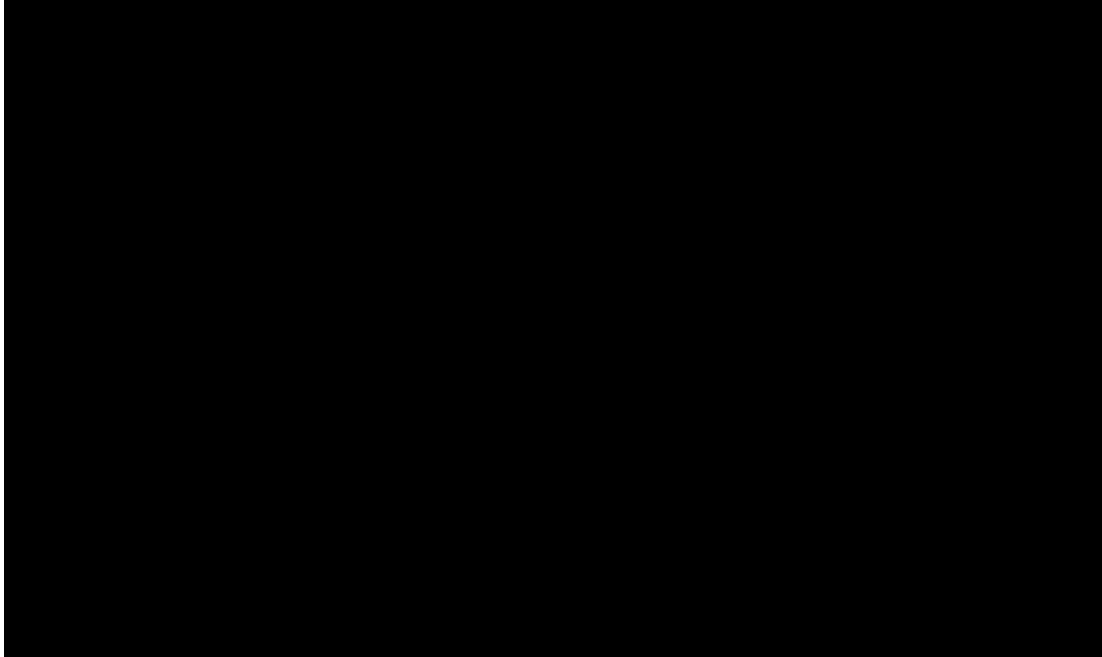
Picture 15 - The M/V Ireland Maneuvering to Dock at Punta Venado



108. Additionally, as set out in Table 2, in April 2015, VMC authorized a capital investment of [REDACTED] for the construction of a supplemental processing plant to increase production capacity and meet growing demand exceeding the capacity of CALICA's existing main

plant.²³⁴ In September 2015, VMC also authorized a [REDACTED] capital investment to replace the shiploader at the private terminal.²³⁵ To meet expected increased demand and capacity, between June 2014 and December 2017 Legacy Vulcan also purchased heavy equipment and machinery, including four draglines, three Caterpillar 992 loaders, three Caterpillar 777 haul trucks, two above-water drills, and one below-water drill, as described in Table 2 below.²³⁶

Table 2: [REDACTED]



109. As [REDACTED] and [REDACTED] explain in their respective witness statements, Legacy Vulcan would not have made many of these long-term investments had Mexico and its instrumentalities not firmly committed to resolve the issues addressed in the 2014 Agreements, including, in particular, the amendment of the POEL.²³⁷ Without the ability to quarry the reserves in La Adelita, CALICA's largest untapped lot, most of these investments would have made no sense.²³⁸

²³⁴ Authorization for Expenditure (AFE) Project Description, Plant 4511, Sac Tun, Supplemental Plant, p. 5 (24 April 2015) (C-0089-ENG).

²³⁵ Witness Statement-[REDACTED]-Claimant's Memorial-ENG, ¶ 54.

²³⁶ *Id.*

²³⁷ *Id.*, ¶ 57; Witness Statement-[REDACTED]-Claimant's Memorial-ENG, ¶ 32.

²³⁸ Witness Statement-[REDACTED]-Claimant's Memorial-ENG, ¶¶ 56-57.

H. THE RESPONDENT'S WRONGFUL MEASURES

110. As discussed below, Mexico (1) repudiated key obligations under the 2014 Agreements that precluded CALICA from commencing operations in La Adelita, (2) refused to honor a final ruling of its own judiciary declaring as illegal the port fees that API Quintana Roo had charged for close to a decade, and (3) wrongfully shut down CALICA's operations at El Corchalito in retaliation for CALICA's attempt to preserve its rights to obtain reimbursement of the illegal port fees.

1. Mexico's Repudiation of the 2014 Agreements

111. As explained in Part II.C.2 above, Legacy Vulcan acquired La Adelita in 1996 to expand its operations after it was assured in writing by the State of Quintana Roo and the Municipality of Solidaridad that quarrying was allowed in that lot.²³⁹ Consistent with that purpose and expectation, in December 1996, CALICA obtained the Corchalito/Adelita State Environmental Authorization and, in November 2000, it obtained the Corchalito/Adelita Federal Environmental Authorization to quarry La Adelita above and below the water table, respectively.²⁴⁰ Even though the POEL recognizes that vested rights to quarry remain unaffected, by 2013, it became clear that SEMARNAT would not issue a permit required to remove vegetation in that lot if the POEL did not *expressly* recognize CALICA's ability to quarry La Adelita.²⁴¹

112. Accordingly, in the 2014 Agreements, CALICA relinquished valuable rights, including its concessioned rights over the public terminal, in exchange for the State of Quintana Roo's and the Municipality of Solidaridad's commitment to amend the POEL so that its zoning regime expressly reflects CALICA's vested rights to quarry La Adelita.²⁴² With the 2014 Agreements signed and the expectation that it would soon be able to begin quarrying La Adelita, Legacy Vulcan committed substantial additional investments — more than [REDACTED] — in the Project between July 2014 and December 2017.²⁴³ But the State of Quintana Roo and the Municipality of Solidaridad repudiated their obligation to amend the POEL.

²³⁹ See *supra* ¶¶ 37, 73.

²⁴⁰ Corchalito/Adelita State Environmental Authorization (11 December 1996) (C-0018-SPA); Corchalito/Adelita Federal Environmental Authorization (30 November 2000) (C-0017-SPA). See *supra* ¶¶ 75-76.

²⁴¹ See *supra* ¶¶ 80, 85.

²⁴² See *supra* ¶¶ 96-99.

²⁴³ See *supra* ¶¶ 105-109.

113. Despite Mexico's initial performance of its obligations under the 2014 Agreements — and its repeated representations to CALICA that it intended to live up to those obligations — by 6 December 2015 it became clear that Mexico did not intend to fully comply with the 2014 Agreements. And by 17 July 2018, Mexico repudiated its obligation to amend the POEL.

a) Mexico's Abandonment of the Process to Amend the POEL

114. Mexican municipalities periodically review their environmental programs to account for changed circumstances or to address development interests.²⁴⁴ Under Mexico's regulatory framework, these reviews are carried out through a process consisting mainly of four phases: characterization, diagnosis, forecast, and proposal.²⁴⁵ The three levels of government, civil society, and members of the private sector participate in this process.²⁴⁶ The execution of the 2014 Agreements coincided with the time when, based on prior practice, updates to the POEL were due to be considered.²⁴⁷

115. On 30 October 2014, in accordance with the 2014 Agreements and the process typically carried out during periodic POEL reviews, representatives of SEMARNAT, the State of Quintana Roo, and the Municipality of Solidaridad established a committee to amend the POEL (the "Committee to Amend the POEL" or the "Committee").²⁴⁸ This Committee consisted of an executive body, comprised of the Mexican authorities that established the Committee, and a technical body, comprised of members of other Mexican government entities, civil society, and the private sector.²⁴⁹ The Committee invited CALICA to participate as a member of its technical body, and CALICA attended every Committee session until April 2016, when, as explained below,

²⁴⁴ Expert Report- [REDACTED] -Environmental-Claimant's Memorial-SPA, ¶¶ 23-29.

²⁴⁵ The characterization phase describes the natural, social, and economic conditions of the studied area, identifying sectoral activities, general environmental attributes, and areas and ecosystems that demand attention; the diagnosis phase analyzes, *inter alia*, which sectoral activities are compatible with the various areas of the region, determining which areas should be conserved, developed, or subjected to mitigation measures; the forecast phase examines environmental issues resulting from the evolution of natural, social, and economic variables in each area; and the proposal phase entails the preparation of a draft local environmental regulation based on the analysis in the previous phases. Expert Report- [REDACTED] -Environmental-Claimant's Memorial-SPA, ¶ 25.

²⁴⁶ *Id.*, ¶¶ 22-29.

²⁴⁷ *Id.*, ¶¶ 99-101.

²⁴⁸ Minutes of the Meeting to Establish the Committee to Amend the POEL, p. 5 (30 October 2014) (C-0090-SPA).

²⁴⁹ *Id.*, pp. 7-9 (C-0090-SPA).

the Committee suddenly stopped convening without completing the process to amend the POEL.²⁵⁰

116. On 21 November 2014, CALICA made a presentation to the Committee in which it explained the environmental authorizations that it had already secured to quarry La Adelita and requested support for a POEL amendment that, based on these authorizations, would allow CALICA to obtain the CUSTF permit to remove vegetation there and commence its authorized quarrying activities.²⁵¹ None of the Committee members objected to CALICA's request. To the contrary, the Mexican Center for Environmental Law ("CEMDA") — the largest and most litigious environmental non-profit group in Mexico — stated that, "if there is already an authorization and [CALICA] has a vested right [we] do not see major problems with [CALICA's] conducting exploitation activities [in that lot]." ²⁵²

117. On 29 May 2015, during the Committee's following session and shortly after the Amended MOU was signed, the Committee to Amend the POEL formally resolved to "update" the POEL to address the issues discussed during its previous session.²⁵³ The Committee hired an environmental expert, Gerardo Gómez Nieto, to assist with the characterization and diagnostic phases of the POEL amendment process.²⁵⁴ His tasks included conducting a comprehensive

²⁵⁰ *Id.*, p. 8 (C-0090-SPA); Minutes of the First Session of the Committee to Amend the POEL, p. 3 (10 November 2014) (C-0091-SPA); Minutes of the Second Session of the Committee to Amend the POEL, p. 3 (21 November 2014) (C-0092-SPA); Minutes of the Third Session of the Committee to Amend the POEL, p. 3 (29 May 2015) (C-0093-SPA); Minutes of the Fourth Session of the Committee to Amend the POEL, p. 2 (30 October 2015) (C-0094-SPA); Minutes of the Fifth Session of the Committee to Amend the POEL, p. 3 (28 January 2016) (C-0095-SPA); Minutes of the Sixth Session of the Committee to Amend the POEL, p. 3 (19 April 2016) (C-0096-SPA).

²⁵¹ Minutes of the Second Session of the Committee to Amend the POEL, pp. 1, 4-5 (21 November 2014) (C-0092-SPA).

²⁵² *Id.*, p. 5 (C-0092-SPA) ("Ms. Alejandra Serrano of CEMDA says that if there is already an authorization and they have an acquired right, she does not see a problem in carrying out their exploitation activity, even if the POEL may not allow it.") (free translation, the original text reads: "La Lic. Alejandra Serrano de CEMDA, comenta que si ya existe una autorización y tienen un derecho adquirido no le ve mayor problema para realizar su actividad de explotación, aunque el POEL no lo permita.").

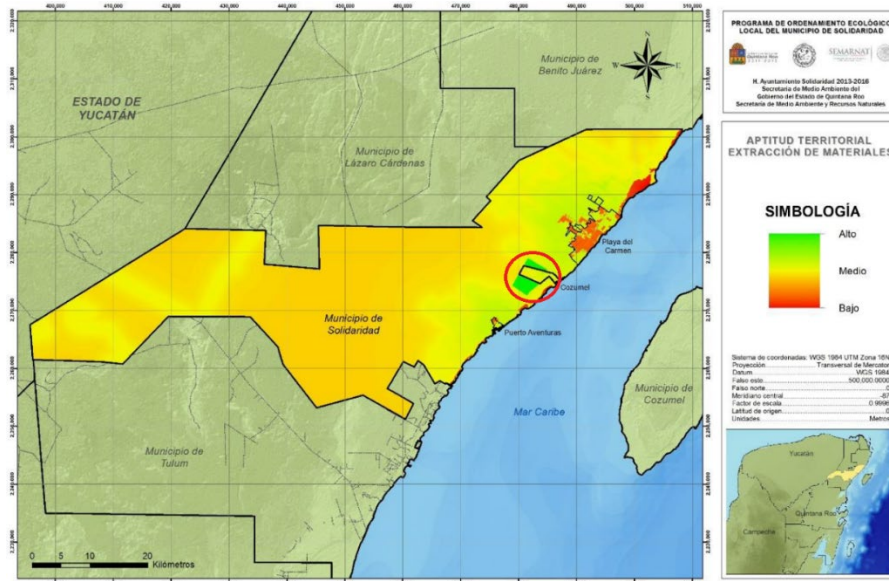
²⁵³ Minutes of the Third Session of the Committee to Amend the POEL, pp. 3-4 (29 May 2015) (C-0093-SPA) ("Agreement 1/29/2015/: The update of the Local Ecological Management Programs [sic] of the Municipality of Solidaridad, issued in 2009, will be carried out.") (free translation, the original texts reads: "Acuerdo 1/29/2015/: Se llevará a cabo la actualización del Programas [sic] de Ordenamiento Ecológico Local del Municipio de Solidaridad, publicado en 2009.").

²⁵⁴ Witness Statement- [REDACTED] -Claimant's Memorial-ENG, ¶ 36.

survey of Solidaridad's soil and determining the areas of greater aptitude for the municipality's ten most important economic sectors, including tourism and quarrying.²⁵⁵

118. On 30 October 2015, the Committee's expert submitted a report entitled "Update to the Local Environmental Regulation of the Municipality of Solidaridad: Diagnostic Phase."²⁵⁶ In this report, Gómez Nieto identified, *inter alia*, the areas of Solidaridad that were best suited for quarrying based on a number of attributes (e.g., the presence of petrous materials and the existence of environmental authorizations for such activities).²⁵⁷ Gómez Nieto concluded that the areas where El Corchalito and La Adelita are located were the most suitable for conducting quarrying operations in the entire municipality, as shown in green in the following map from his report.²⁵⁸

Map 4 — Territorial Aptitude: Extraction of Petrous Materials



²⁵⁵ *Id.*; Update to the Program for Local Environmental Regulation of the Municipality of Solidaridad: Diagnostic Phase, p. 61 (30 October 2015) (C-0097-SPA) (hereinafter, the "Diagnostic Report").

²⁵⁶ Diagnostic Report, p. 61 (C-0097-SPA).

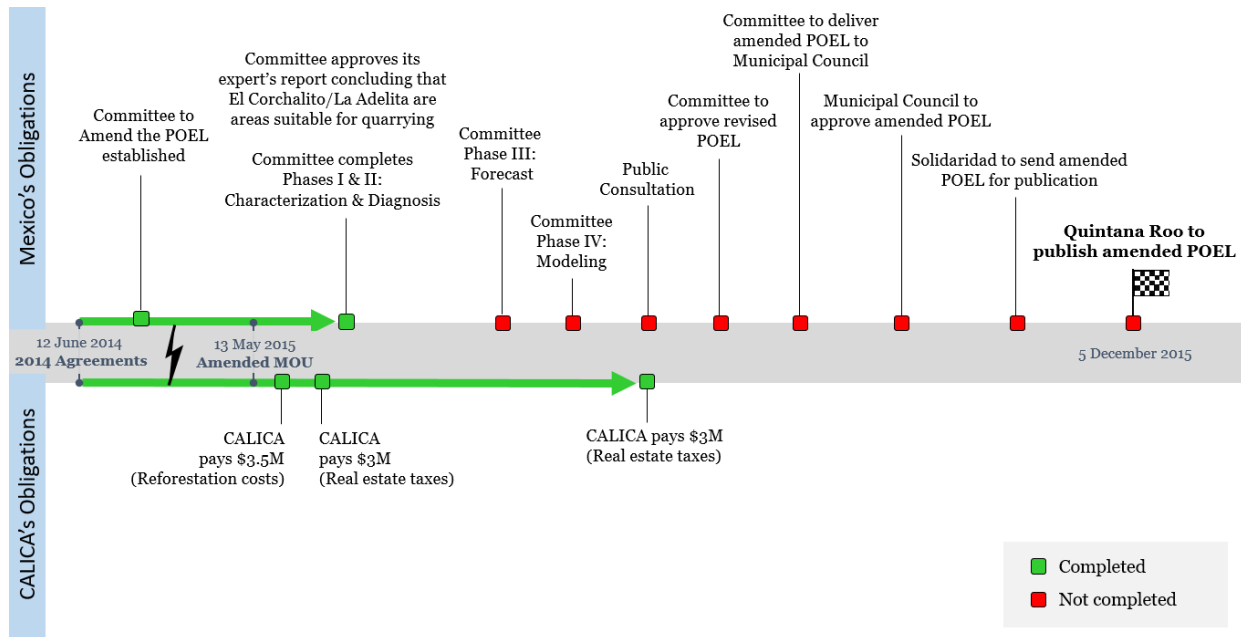
²⁵⁷ *Id.*, pp. 131-135 (C-0097-SPA). Specifically, Gómez Nieto considered and weighted the following six variables: (i) existence of previous environmental authorizations (41%), presence of petrous materials (35%), proximity to population centers (9%), the available means of transportation of those petrous materials (7%), existing banks (6%), and the depth of the water mantle (2%). *Id.*, p. 131 (C-0097-SPA).

²⁵⁸ *Id.*, p. 136 (C-0097-SPA); Witness Statement- [REDACTED]-Claimant's Memorial-ENG, ¶ 36.

119. The Committee to Amend the POEL formally approved its expert's report on 28 January 2016.²⁵⁹ With this act, and based on Gómez Nieto's conclusions in the diagnostic phase, all that was left in the process to amend the POEL was for the Committee to assess how quarrying activities would evolve in the municipality and to propose the specific text of the amendment to the POEL.²⁶⁰

120. On 19 April 2016, the Committee to Amend the POEL held its last substantive session without then or thereafter presenting the text for the POEL's amendment.²⁶¹ The Committee suddenly stopped meeting, bringing the formal amendment process initiated in 2014 to an end.²⁶² As seen in the timeline below, Mexico failed to complete the steps it undertook in the 2014 Agreements so that CALICA could commence quarrying activities in La Adelita.

Figure 3 — Timeline of Main Obligations under the 2014 Agreements



²⁵⁹ Minutes of the Fifth Session of the Committee to Amend the POEL, p. 6 (28 January 2016) (C-0095-SPA) ("Agreement 03/28/01/2016: The phases of characterization and diagnosis are approved by majority vote.") (free translation, the original text reads: "Acuerdo 03/28/01/2016: Se aprueban por mayoría las etapas de caracterización y diagnóstico."); *see also* Expert Report- [REDACTED]-Environmental-Claimant's Memorial-SPA, ¶ 103.

²⁶⁰ Expert Report- [REDACTED]-Environmental-Claimant's Memorial-SPA, ¶ 102.

²⁶¹ Minutes of the Sixth Session of the Committee to Amend the POEL (19 April 2016) (C-0096-SPA).

²⁶² Witness Statement- [REDACTED]-Claimant's Memorial-ENG, ¶¶ 31, 37-38; Expert Report- [REDACTED]-Environmental-Claimant's Memorial-SPA, ¶ 104.

b) The State of Quintana Roo's and Municipality of Solidaridad's Repudiation of the Amended MOU

121. On 7 June 2016, Mexico held elections for state and municipal government posts, including governors and mayors. Carlos Manuel Joaquín was elected Governor of the State of Quintana Roo for six years (2016-2022) and Cristina Torres was elected Mayor of the Municipality of Solidaridad for two years (2016-2018).²⁶³ Governor Joaquín and Mayor Torres were sworn in on 25 September 2016 and 30 September 2016, respectively.²⁶⁴

122. A few weeks after the elections, on 2 August 2016, CALICA's [REDACTED], met with Governor-elect Joaquín and his advisers to discuss the 2014 Agreements.²⁶⁵ During this meeting, [REDACTED] explained the obligations that the State of Quintana Roo and the Municipality of Solidaridad had undertaken under the 2014 Agreements to amend the POEL so that CALICA could exercise its vested rights to quarry La Adelita.²⁶⁶ Governor-elect Joaquín told [REDACTED] that he was skeptical that the 2014 Agreements actually existed.²⁶⁷ He seemed surprised when [REDACTED] gave him a copy of the agreements, prompting Joaquín to bring the meeting to an end.²⁶⁸

123. Two weeks later, on 17 August 2016, [REDACTED] met with Mayor-elect Torres to discuss the 2014 Agreements and the Municipality of Solidaridad's commitment to amend the POEL.²⁶⁹ She told [REDACTED] that it would be difficult for the Municipality of Solidaridad and the State of Quintana Roo to comply voluntarily with the 2014 Agreements and "would rather act on court orders than confront the hotel industry and environmental groups" opposed to CALICA's operations in Quintana Roo.²⁷⁰ Torres offered [REDACTED] some ideas on how the State and

²⁶³ *Rotunda victoria para Carlos Joaquín en elecciones de Q. Roo*, SIPSE.COM (6 June 2016) (C-0098-SPA); *Cristina Torres conformará un gabinete ciudadano*, SIPSE.COM (7 June 2016) (C-0099-SPA).

²⁶⁴ *Carlos Joaquín Gonzales jura como nuevo gobernador de Q. Roo*, EL UNIVERSAL (25 September 2016) (C-0100-SPA); *Recibimos un municipio con muchos problemas*, EL UNIVERSAL (30 September 2016) (C-0101-SPA).

²⁶⁵ Witness Statement-[REDACTED]-Claimant's Memorial-ENG, ¶¶ 42-43.

²⁶⁶ *Id.*, ¶ 43.

²⁶⁷ *Id.*

²⁶⁸ *Id.*

²⁶⁹ *Id.*, ¶ 45.

²⁷⁰ *Id.*

Municipality could carry out the rest of their obligations under the 2014 Agreements but said that she wanted to speak to Governor-elect Joaquín before moving forward with any of these ideas.²⁷¹

124. Joaquín and Torres assumed office soon thereafter. As already noted, by August 2016, the Committee to Amend the POEL had held its final substantive session without having even proposed text to amend the POEL.²⁷²

125. On 30 March 2017, following many months of governmental inaction to amend the POEL, ██████ met with Governor Joaquín to bring up the issue again.²⁷³ Governor Joaquín asked ██████ to show him La Adelita on his cellphone's Google Maps app so that he could visualize its location and area.²⁷⁴ Governor Joaquín said that "it would be unpalatable to the public to allow CALICA to quarry such a large area notwithstanding the environmental authorizations that Mexico's Federal Government and the State of Quintana Roo may have granted CALICA to do so."²⁷⁵ He added that tourism interests had been lobbying his administration to develop the lots that CALICA had quarried.²⁷⁶ He said that it would be politically beneficial to him for CALICA to show the tourism industry that it had a plan to develop or intended to sell the lakes that had formed in its lots.²⁷⁷ ██████ responded that Legacy Vulcan would consider any reasonable proposals, provided that CALICA was first allowed to commence operations in La Adelita.²⁷⁸ The meeting ended without further discussion of this issue.²⁷⁹

126. A few days later, on 3 April 2017, the Legislature of the State of Quintana Roo debated and approved a non-binding Point of Agreement introduced by then state legislator and later Solidaridad mayor Laura Beristain, urging that the POEL not be amended to allow CALICA to quarry La Adelita.²⁸⁰ For over a year, Beristain had authored CALICA-bashing tweets under

²⁷¹ *Id.*

²⁷² *See supra* ¶ 120.

²⁷³ Witness Statement-█████-Claimant's Memorial-ENG, ¶ 48.

²⁷⁴ *Id.*

²⁷⁵ *Id.*

²⁷⁶ *Id.*, ¶ 49.

²⁷⁷ *Id.*

²⁷⁸ *Id.*

²⁷⁹ *Id.*

²⁸⁰ Quintana Roo Lower House Ordinary Session No. 15, Debate Log, p. 19 (statement of Laura Beristain) (3 April 2017) (C-0102-SPA).

the “#STOPCALICA” hashtag expressing her political opposition to the company’s operations.²⁸¹ During her floor speech, Beristain premised her Point of Agreement on the false allegation that CALICA “is one of the main suppliers of materials for the works promoted by Donald Trump” and that “the ground of [Quintana Roo]” was being allowed “to become part of [President Trump’s] wall of hate.”²⁸²

127. Two days later, on 5 April 2017, during a press conference and in response to a question about Beristain’s Point of Agreement, Mayor Torres said that she was still waiting to receive a status report on the progress of the Committee to Amend the POEL and that, once she received this report, she would make a final decision.²⁸³ By this time, the Committee had not met for nearly a year, despite Mexico’s commitment to amend the POEL by 5 December 2015.²⁸⁴ When asked again about CALICA, Mayor Torres said that, “to her administration, CALICA had not asked anything [...] and so [she did not] know where [the media was] getting the information that [the Municipality of Solidaridad] intend[ed] to make a modification [to the POEL], which also [did

²⁸¹ Laura Beristain, “The Mayan jungle must be protected. NO to changes in land use, [the] POEL must protect biological wealth #STOPCALICA” (free translation, the original text reads: “La selva maya debe protegerse. NO a los cambios de uso de suelo, POEL debe conservar riqueza biológica #ALTOaCALICA,”) 28 January 2016, 9:40 PM, Tweet (C-0103-SPA). As discussed below, in 2018, Beristain became mayor of the Municipality of Solidaridad. Since her mayoral campaign and tenure as mayor, Beristain has attacked CALICA at political events, in the media, and through social networks. She is the main promoter of a Twitter hashtag — “#STOPCALICA” (“#ALTOaCALICA”) — which has been used to disparage CALICA.

²⁸² Quintana Roo Lower House, Ordinary Session No. 15, Debate Log, p. 39 (statement of Laura Beristain) (3 April 2017) (C-0102-SPA) (free translation, the original text reads: “CALICA, es una de las principales proveedoras de materiales de las obras promovidas por Donald Trump [...] ¿En que estarán pensando? Los que quieren permitir que el suelo de mi estado se convierta en parte del muro del odio.”).

²⁸³ Noticias Canal 10, *No existe ninguna petición de Calica, Q.Roo para el cambio de uso de suelo: Cristina Torres*, YOUTUBE (uploaded 5 April 2017), <https://youtube.com/watch?v=vL1ifRAPajA&list=PLVo9hFLz5RAKeuksCArHrXZsSMva9Bo60&index=18> (C-0104-SPA) (quoting Mayor Torres as saying that, upon receiving a report from the Committee, she would “know if the relevant areas are determined for conservation ... in which case [she] would keep them as ‘conservation,’ and, if the areas are not determined for conservation purposes, [she would] see what that decision is based on, what the experts opine about it, why it is not determined for conservation purposes, and then make a final decision”) (free translation, the original audio states that Ms. Torres’ position is to: “saber si el área está para conservación, mantenerla para conservación, si el área no está para conservación, ver en qué se basa ese dictamen con la opinión de los técnicos, ¿por qué no sería conservación? y ya entonces ya tomar una decisión final.”).

²⁸⁴ See *supra* ¶ 120.

not] concern [the Municipality of Solidaridad].”²⁸⁵ This statement took CALICA by surprise, as Mayor Torres had met with [REDACTED] to discuss the 2014 Agreements previously.²⁸⁶

128. On 20 June 2017, [REDACTED] met with the Secretary of Ecology and Environment of the State of Quintana Roo, Alfredo Arellano, to further encourage compliance with the state’s obligations regarding the POEL in the 2014 Agreements.²⁸⁷ During this meeting, Arellano acknowledged that CALICA had complied with all Mexican environmental laws and regulations and told [REDACTED] that he did not foresee any technical, objective issues with CALICA quarrying La Adelita.²⁸⁸ Arellano told [REDACTED] that vested interests were using unfounded allegations against CALICA to advance their private agendas.²⁸⁹

129. On 2 August 2017, [REDACTED] met again with Governor Joaquín to continue their discussion of the 2014 Agreements.²⁹⁰ After [REDACTED] told Governor Joaquín that Arellano did not foresee any technical, objective issues with CALICA’s planned activities in La Adelita, Governor Joaquín said that amending the POEL would nevertheless be difficult.²⁹¹

130. On 8 July 2018, Beristain was elected Mayor of the Municipality of Solidaridad.²⁹² Under the Beristain administration, the Committee to Amend the POEL never resumed its work.²⁹³

²⁸⁵ Noticias Canal 10, *No existe ninguna petición de Calica, Q.Roo para el cambio de uso de suelo: Cristina Torres*, YOUTUBE (uploaded 5 April 2017), <https://www.youtube.com/watch?v=vL1ifRAPajA&list=PLVo9hFLz5RAKeuksCArHrXZsSMva9Bo60&index=18> (C-0104-SPA).

²⁸⁶ Witness Statement-[REDACTED]-Claimant’s Memorial-ENG, ¶ 50.

²⁸⁷ *Id.*, ¶ 51.

²⁸⁸ *Id.*

²⁸⁹ *Id.*

²⁹⁰ *Id.*, ¶ 52.

²⁹¹ *Id.*

²⁹² *Laura Beristain asegura que trabajará con la sociedad*, SIPSE.COM (10 July 2018) (C-0105-SPA) (Beristain was sworn in on 30 September 2018).

²⁹³ In 2019, Mayor Beristain created the Municipal Ordinance Council tasked with issuing a new POEL, disregarding the Committee’s 2014-2016 steps to amend the POEL. CALICA was not invited to participate in the Council’s meetings. Witness Statement-[REDACTED]-Claimant’s Memorial-ENG, ¶ 38.

131. On 17 July 2018, ██████ met with Governor Joaquín to once again encourage the State of Quintana Roo to comply with the 2014 Agreements.²⁹⁴ Governor Joaquín began the meeting by saying that, while he understood the obligations that the State of Quintana Roo had assumed in those agreements, amending the POEL was not politically viable and therefore “highly unlikely within any foreseeable future.”²⁹⁵ Governor Joaquín acknowledged that “the law is on CALICA’s side” but added that “interested parties” might resort to activism and social opposition.²⁹⁶ When ██████ asked Governor Joaquín if he would consider a “land-use swap” between El Corchalito and La Adelita by creating some kind of protected area in El Corchalito, Governor Joaquín emphatically said: “You are not entering La Adelita — period.”²⁹⁷

2. Mexico’s Failure to Comply with the Rulings of Its Own Judiciary

132. As noted in Part II.E.1.(b) above, after nearly 10 years of litigation, on 25 January 2017, Mexico’s Supreme Court affirmed lower court rulings holding that it was contrary to the CALICA Port Concession, and thus unlawful, for API Quintana Roo to collect fees from Legacy Vulcan’s vessels docking at Punta Venado.²⁹⁸ Even though Mexico’s judiciary had definitively established that it was illegal to do so, API Quintana Roo continued charging CALICA port fees for using CALICA’s private terminal through 3 December 2017.²⁹⁹

133. On 2 January 2018, pursuant to the court rulings in its favor, CALICA made a court filing to preserve its right to recover the ██████ in port fees that API Quintana Roo had unlawfully collected from CALICA for more than a decade.³⁰⁰

134. On 19 January 2018, CALICA was summoned to a meeting with Director of API Quintana Roo, Alicia Ricalde, and the SCT’s Director General of Ports, Alejandro Hernández. At this meeting, Director Ricalde, visibly upset, said that API Quintana Roo did not have the funds

²⁹⁴ Witness Statement-█████-Claimant’s Memorial-ENG, ¶ 59.

²⁹⁵ *Id.*

²⁹⁶ *Id.*

²⁹⁷ *Id.*

²⁹⁸ Decision of Mexico’s Supreme Court, Claim 1256/2016, pp. 18-19 (25 January 2017) (C-0059-SPA); Decision of the Federal Tribunal on Fiscal and Administrative Matters, D.A. 482/2013-8536, pp. 271-272 (3 September 2014) (C-0106-SPA).

²⁹⁹ Witness Statement-█████-Claimant’s Memorial-ENG, ¶ 46.

³⁰⁰ CALICA’s filing regarding port fees (2 January 2018) (C-0107-SPA).

to reimburse CALICA and called [REDACTED] who was trying to bankrupt API Quintana Roo by “being on the Americans’ side.”³⁰¹ [REDACTED] explained that CALICA had filed the request only to preserve its rights and that [REDACTED] meet with Governor Joaquín to discuss this issue.³⁰² Ricalde responded: “read between the lines, [REDACTED], Governor Joaquín does not like you!”³⁰³

135. As soon as Director Ricalde finished talking, an API Quintana Roo attorney who was at the meeting told [REDACTED] that, “if CALICA continues to take these kinds of measures against API Quintana Roo and the State of Quintana Roo, we will shut down your operations.”³⁰⁴ This threat materialized five days later when, as explained in Part II.H.3 below, the Mexican government shut down CALICA’s operations in El Corchalito. The measure was extensive to La Adelita, further precluding the launch of operations there.³⁰⁵

136. On 22 January 2018, three days after [REDACTED] met with Ricalde, a political ally and member of Beristain’s team of advisors, Marciano “Chano” Toledo, led a protest outside CALICA’s facilities.³⁰⁶ He climbed the entrance gate to those facilities and, while holding a chainsaw, hoisted pejorative signs against CALICA.³⁰⁷ He also yelled allegations that echoed the ones Beristain had made to justify her Point of Agreement in April 2017. He yelled, for example: “Donald Trump, [expletive] president: you’re not going to take one more gram for your [expletive] wall of ignominy. We’re going to wait for you, bastard. We’re going to wait for you right here.”³⁰⁸

³⁰¹ Witness Statement-[REDACTED]-Claimant’s Memorial-ENG, ¶ 57.

³⁰² *Id.*

³⁰³ *Id.*

³⁰⁴ *Id.*, ¶ 58.

³⁰⁵ *See infra* ¶ 149.

³⁰⁶ *Arma ‘Chano’ Toledo Protesta Contra CALICA: Arremete Activista Contra Trump y El Negocio de Exportación de Material Pétreo desde la Riviera Maya; “Es un Presidente de [...]”, Dice,* NOTICARIBE (22 January 2018) (C-0108-SPA).

³⁰⁷ *Id.*

³⁰⁸ *Id.* (“Donald Trump, [expletive] president: you’re not going to take one more gram for your [expletive] wall of ignominy. We’re going to wait for you, bastard. We’re going to wait for you right here. Don’t back down. You’re acting tough, you bastard/, because you don’t know us well yet. There’s a history of us not giving in to [expletive] like you, you [expletive], [expletive] president. Here, in Mexico, we do have dignity, and we also ask for dignity also from the authorities, from all over the state, from all the federal authorities. Don’t let CALICA devastate Mexican land anymore. [CALICA] is offering US\$50,000,000 in bribes to change the land use. We can’t allow it. Let’s call out those traitors, if they do.] We say: Donald Trump, don’t take a gram of soil from here for your [expletive] wall over there [...] here, you bastard, you’re going to have to get through us, you bastard [...]”). Toledo has continued his attacks against CALICA, and, as

Picture 16 - Marciano “Chano” Toledo Raising a Chainsaw on Top of CALICA’s Entrance



137. To date, API Quintana Roo has not reimbursed CALICA the [REDACTED] in port fees that it unlawfully charged more than a decade ago, even though it is required to do so under Mexican law.³⁰⁹

3. Mexico’s Unlawful Shutdown of Operations in El Corchalito and Further Bar to Operations in La Adelita

138. As explained in Part II.D above, CALICA has conducted quarrying activities in an environmentally-conscious manner and in compliance with all of its permits for over thirty years.³¹⁰ Illustrating this fact, between 2003 and July 2016, PROFEPA awarded CALICA six Clean

recently as March 2020, he appeared in a radio show making unfounded allegations against CALICA’s quarrying operations in Quintana Roo. *Aunque CALICA se llame Sac Tun, sigue siendo una empresa ecocida: ‘Chano’ Toledo*, PEDRO CANCHÉ NOTICIAS (8 March 2020), (C-0109-SPA).

³⁰⁹ Mexican Federal Administrative Procedure Law, Articles 6, 8, available at http://www.diputados.gob.mx/LeyesBiblio/pdf/112_180518.pdf (C-0110-SPA) (establishing that administrative acts are valid until they are declared invalid by administrative or judicial authorities and that such invalidity produces retroactive effects); Mexican Federal Civil Code, Article 2080, available at: http://www.diputados.gob.mx/LeyesBiblio/pdf/2_030619.pdf (C-0111-SPA) (establishing that a debtor must satisfy its debts 30 days after a creditor’s request for payment). On 10 January 2018, the Sixth District Court of the State of Quintana Roo notified API Quintana Roo that CALICA had filed on 2 January 2018 a request for reimbursement of the port fees that it unduly paid between 2007-2017. See Notification sent by the Sixth District Court of the State of Quintana Roo to API Quintana Roo, pp. 11-14 (10 January 2018) (C-0112-SPA). In response to that filing, API Quintana Roo threatened to shut CALICA’s operations down.

³¹⁰ See *supra* ¶¶ 57-58.

Industry certificates for outstanding environmental performance.³¹¹ As required by the Corchalito/Adelita Federal Environmental Authorization, CALICA also submitted reports every four months documenting CALICA's compliance with that authorization.³¹²

139. On 12 May 2017, PROFEPA ordered an inspection to verify CALICA's compliance with the Corchalito/Adelita Federal Environmental Authorization.³¹³ As part of this inspection, PROFEPA's inspectors were tasked with measuring the area that CALICA had quarried in El Corchalito. PROFEPA's inspectors visited El Corchalito and La Adelita on 15-19 May 2017.³¹⁴ On 19 May 2017, PROFEPA's inspectors issued a report detailing their observations and the coordinates within which CALICA was allegedly conducting quarrying activities. Based on these coordinates, PROFEPA observed that CALICA had purportedly exceeded the quarrying area limits in the Corchalito/Adelita Federal Environmental Authorization.³¹⁵

140. On 26 May 2017, in a submission to PROFEPA, CALICA explained that the inspectors' methodology was flawed. CALICA explained that PROFEPA's inspectors had, *inter alia*, (i) failed to establish an inspection protocol; (ii) acknowledged that their measurements were "estimates" and "approximations;" and (iii) used inadequate and improperly calibrated instruments for the task, including a Global Positioning System (GPS) device that, according to its manual, "is intended to be used as travel aid and *must not be used for any purpose requiring precise measurement of direction, distance, location or topography.*"³¹⁶

141. Pursuant to Mexican law, CALICA offered to submit an expert report addressing whether its observations about the flaws in the PROFEPA inspection were correct.³¹⁷ PROFEPA allowed CALICA to do so, and, on 13 September 2017, CALICA appointed Tomás de la Cruz, a civil

³¹¹ See *supra* ¶ 57.

³¹² Corchalito/Adelita Federal Environmental Authorization, p. 20 (C-0017-SPA) (noting that CALICA must prepare and submit information regarding its compliance with the terms and conditions in the Authorization for PROFEPA's analysis and validation). For a sample report see, e.g., CALICA's Eleventh Quadrimester Report and Corresponding Acknowledgements of Receipt (23 May 2005) (C-0113-SPA).

³¹³ First PROFEPA Inspection Order (12 May 2017) (C-0114-SPA).

³¹⁴ First PROFEPA Inspection Report, pp. 1, 71 (19 May 2017) (C-0115-SPA).

³¹⁵ *Id.*, pp. 38, 46 (C-0115-SPA).

³¹⁶ CALICA's Observation to the First PROFEPA Inspection Report, pp. 24-25 (26 May 2017) (C-0115-SPA) (emphasis added).

³¹⁷ *Id.*, pp. 31-32 (C-0116-SPA).

engineer, to conduct a review of PROFEPA's findings.³¹⁸ Before receiving CALICA's expert report, PROFEPA took the unusual step of appointing its own expert, David May, to review PROFEPA's own inspection as well.³¹⁹ By appointing its own expert, PROFEPA tacitly acknowledged that the determination of the area quarried by CALICA in El Corchalito required technical and specialized knowledge that the inspectors lacked.³²⁰

142. In late October 2017, De la Cruz and May submitted their respective expert reports. Both confirmed that CALICA's observations regarding the flaws in the inspection were correct.³²¹ PROFEPA's and CALICA's experts concluded that PROFEPA's inspection was inadequate and its measurements of the relevant area were imprecise.³²² The experts agreed that, since the main instrument that PROFEPA had used in its inspection was a GPS device intended for recreational purposes, the geographic coordinates that the inspectors had obtained were inaccurate and, therefore, unreliable.³²³ By way of example, De la Cruz noted that PROFEPA's inspection report included a map showing a nonexistent service road crossing through a lake within El Corchalito.³²⁴

143. PROFEPA acknowledged the inconsistencies and errors in its inspectors' report, thus rendering the report and inspection invalid. Under Mexican law, PROFEPA was required to close the administrative proceeding and order a new independent inspection.³²⁵ Instead, on 17 November 2017, PROFEPA took the unusual step of ordering a "supplemental" inspection to be carried out as part of the same administrative proceeding.³²⁶

³¹⁸ Shutdown Order, p. 16 (22 January 2018) (C-0117-SPA).

³¹⁹ Expert Report-[REDACTED]-Environmental-Claimant's Memorial-SPA, ¶ 144 (explaining that given that PROFEPA is a party and a judge in PROFEPA's administrative proceedings, it is unusual for PROFEPA to appoint its own expert without first waiting to see whether it agrees with the parties' expert).

³²⁰ *Id.*, ¶ 146.

³²¹ Shutdown Order, p. 17 (22 January 2018) (C-0117-SPA).

³²² Note from SEMARNAT to CALICA regarding the experts' coinciding reports, p. 3 (17 November 2017) (C-0119-SPA).

³²³ *Id.*, p. 4 (C-0119-SPA).

³²⁴ Expert Report of De la Cruz Hernández, p. 17 (26 October 2017) (C-0120-SPA).

³²⁵ Expert Report-[REDACTED]-Environmental-Claimant's Memorial-SPA, ¶¶ 149-153.

³²⁶ Supplemental PROFEPA Inspection Order (24 November 2017) (C-0121-SPA); Expert [REDACTED]-Environmental-Claimant's Memorial-SPA, ¶ 149.

144. PROFEPA based its supplemental inspection on Article 50 of the Federal Administrative Procedure Law, which provides that, when carrying out an administrative action such as the PROFEPA inspection, a governmental “authority may draw on the means of proof it deems necessary, without further limitation than those established in the law.”³²⁷ While this legal provision allowed PROFEPA to obtain additional evidence, it could not be used to *correct* invalid acts, such as PROFEPA’s concededly flawed inspection.³²⁸ As explained in the expert report of [REDACTED], Mexico’s Supreme Court has held that a supplemental inspection cannot be used to correct the irregularities of an invalid administrative proceeding.³²⁹ Under Mexican law, acts deriving from an invalid act, such as PROFEPA’s first inspection and the order to conduct a “supplemental” inspection, are also invalid.³³⁰ PROFEPA’s supplemental inspection was thus invalid *ab initio*.³³¹

145. The asserted purpose of PROFEPA’s “supplemental” inspection was to verify CALICA’s compliance with the provision of the Corchalito/Adelita Federal Environmental Authorization setting CALICA’s extraction limits for El Corchalito and La Adelita.³³² PROFEPA conducted this inspection on 27-29 November 2017.

146. Like its first inspection, PROFEPA’s “supplemental” inspection was plagued by multiple flaws and inconsistencies.³³³ Three stand out. *First*, the methodology and instruments used by the inspectors to measure the quarried area in El Corchalito were unsound because (i) PROFEPA inspectors used a GPS device that was insufficiently precise to measure geographical

³²⁷ Mexican Federal Administrative Procedure Law, Article 50, available at: http://www.diputados.gob.mx/LeyesBiblio/pdf/112_180518.pdf (C-0110-SPA) (“In administrative procedures, all kinds of evidence shall be admissible [...]. The authority may secure any means of evidence it deems necessary, subject only to such limitations as are prescribed by law.”) (free translation, the original text reads: “En los procedimientos administrativos se admitirán toda clase de pruebas [...]. La autoridad podrá allegarse de los medios de prueba que considere necesarios, sin más limitación que las establecidas en la ley.”). *See also* Expert Report-[REDACTED]-Environmental-Claimant’s Memorial-SPA, ¶ 15o.

³²⁸ Expert [REDACTED]-Environmental-Claimant’s Memorial-SPA, ¶¶ 150-152.

³²⁹ *Id.*, ¶¶ 152-153 (noting also that PROFEPA’s supplemental inspection was unusual and that such inspections are not contemplated under Mexican law).

³³⁰ *Id.*

³³¹ *Id.*, ¶ 154.

³³² Supplemental PROFEPA Inspection Order, p. 2 (24 November 2017) (C-0121-SPA).

³³³ The PROFEPA inspection’s myriad deficiencies are detailed in [REDACTED] declaration. Expert Report-[REDACTED]-Environmental-Claimant’s Memorial-SPA, Section VII.B(2)-(7).

coordinates accurately; and (ii) the inspectors' measurements were only estimates and approximations of the area effectively quarried in El Corchalito.³³⁴

147. *Second*, PROFEPA supposedly determined the area where CALICA had extracted limestone below the water table by measuring the area of the bodies of water that had formed after the extraction, instead of the actual extraction area.³³⁵ This methodology provided an approximation of the extraction area but not an exact measurement, and it certainly did not provide any reasonable basis to determine the volumes that had been extracted.³³⁶ A topographical survey and a bathymetrical survey would have been the proper means by which to measure the extraction area and volumes extracted, but the inspectors failed to conduct such surveys.³³⁷ Instead, PROFEPA's informal method showed that CALICA had purportedly exceeded its permitted limits by 2.15 of 140 hectares (just over 1% of the area).³³⁸ Given the minimal extent of the allegedly breached limits, a more exact method would have been warranted, especially if the consequence of this finding was the draconian measure of complete shutdown of quarrying activities.³³⁹

³³⁴ Shutdown Order, pp. 170, 187, 190 (22 January 2018) (C-0117-SPA) (stating that the objective was to observe "estimated, approximate areas"); Expert Report-[REDACTED]-Environmental-Claimant's Memorial-SPA, ¶¶ 181-190, 216, 218-219. Additionally, the inspectors were not duly authorized to conduct the supplemental inspection. To be valid, PROFEPA inspections need to be conducted by a duly identified and authorized inspector. Here, the inspectors inexplicably showed up with long-expired identifications, thus rendering them *not* duly authorized to conduct the inspection. Expert Report-[REDACTED]-Environmental-Claimant's Memorial-SPA, ¶¶ 167-169.

³³⁵ Second PROFEPA Inspection Report, p. 9 (27 November 2017) (C-0118-SPA); Shutdown Order, pp. 278-279 (22 January 2018) (C-0117-SPA); *see also* Shutdown Order, p. 118 (laying out PROFEPA's reasoning that measuring the bodies of water is their "preponderant way of knowing *in an approximate manner* the extraction volume of petrous materials") (free translation, the original reads: "la medición de los espejos de agua son preponderantes para conocer *de manera aproximada* los volúmenes de extracción de material pétreo.") (emphasis added).

³³⁶ Expert Report-[REDACTED]-Environmental-Claimant's Memorial-SPA, ¶¶ 182-183 (explaining that PROFEPA measured the "bodies of water, rather than the extracted area below the water. [...] PROFEPA should have used a method that allowed the analysis of the effectively used area (extracted area) below the lake in order to determine the area and be certain about the extracted volumes.").

³³⁷ *Id.*, ¶¶ 240, 247.

³³⁸ Shutdown Order, pp. 278-279 (22 January 2018) (C-0117-SPA); *see also* Expert Report-[REDACTED]-Environmental-Claimant's Memorial-SPA, ¶ 189 ("PROFEPA considered the 142.15 hectares of the lake, as a total equivalence to 142.15 hectares of extractive area. The authority does not provide an adequate method of measuring the work carried out under the water table, and using exclusively the surface occupied by the lake is not technically a direct indication of the amount of material extracted or used.").

³³⁹ Expert Report-[REDACTED]-Environmental-Claimant's Memorial-SPA, ¶ 189 (noting that pursuant to CALICA's Environmental Impact Statement, PROFEPA should have measured the area, depth, and

148. *Third*, the inspectors went beyond the asserted purpose and scope of the “supplemental” inspection by assessing whether the operation of the Project was generally in compliance with the Environmental Impact Statement that CALICA had submitted to SEMARNAT in 2000.³⁴⁰ This was contrary to basic principles of administrative procedure and violated CALICA’s rights.³⁴¹ Inspectors may not unilaterally determine the purpose of the inspection on site.³⁴² Under Mexican law, if inspectors notice during an inspection that they need to verify compliance with another obligation, they must complete the inspection and may thereafter request that PROFEPA order a new inspection.³⁴³ This never occurred.

149. On 22 January 2018, days after API Quintana Roo threatened CALICA with shutting down the Project, PROFEPA issued an “*Acuerdo de Emplazamiento*” ordering the shutdown of activities in El Corchalito based on the flawed findings from its “supplemental” inspection (the “Shutdown Order”).³⁴⁴ Even though CALICA has not been able to quarry La Adelita because of Mexico’s repudiation of the Amended MOU, the Shutdown Order also applies to that lot, further precluding activities there. The purported rationale for this order was CALICA’s alleged quarrying of 2.15 hectares, or slightly more than 1%, over the 140-hectare limit established in the Corchalito/Adelita Federal Environmental Authorization.³⁴⁵

150. The Shutdown Order failed to provide proper grounds for its issuance, contrary to the requirements of Mexican law.³⁴⁶ Mexican law allows the federal government to close facilities such as CALICA’s “[w]hen there is an *imminent risk* of ecological imbalance, or of damage or severe deterioration to natural resources.”³⁴⁷ No such finding supported PROFEPA’s Shutdown Order. Instead, it was based on “a *probable* non-compliance [with the Corchalito/Adelita Federal Environmental Authorization], as [CALICA] *allegedly* exceeded by 2.15 hectares the area

volume to obtain a more accurate measurement and determine CALICA’s compliance with the Corchalito/Adelita Federal Environmental Authorization).

³⁴⁰ *Id.*, ¶¶ 158-161.

³⁴¹ *Id.*, ¶ 159.

³⁴² *Id.*, ¶ 161.

³⁴³ *Id.*

³⁴⁴ Shutdown Order, p. 278 (22 January 2018) (C-0117-SPA).

³⁴⁵ *Id.*, p. 281 (C-0117-SPA).

³⁴⁶ Expert Report- [REDACTED]-Environmental-Claimant’s Memorial-SPA, ¶ 174 *et seq.*

³⁴⁷ Mexico’s General Law of Ecological Balance, Article 170 (CL-0127-SPA) (emphasis added).

authorized for the extraction of limestone below the water table.”³⁴⁸ PROFEPA further reasoned that the alleged excess extraction resulted in an undefined “risk of damage to natural resources” because SEMARNAT purportedly had not evaluated its environmental impact.³⁴⁹

151. PROFEPA made no showing of risk of environmental damage — let alone an imminent one — from the alleged excess extraction.³⁵⁰ Instead of making such a showing (through a technical or other study, for example), PROFEPA merely asserted that CALICA’s failure to obtain an amended authorization allowing an additional quarrying area of 2.15 hectares warranted the shutdown.³⁵¹ But PROFEPA could not have reasonably believed that quarrying 142.15 hectares instead of 140 posed a risk to natural resources — let alone an imminent risk — because SEMARNAT (of which PROFEPA is part) had already assessed the potential impact of a much larger area when it issued the Corchalito/Adelita Federal Environmental Authorization.³⁵²

152. On 24 January 2018, PROFEPA executed the Shutdown Order issued two days earlier.³⁵³ Under Mexican law, PROFEPA is required to give advance notice of a shutdown order.³⁵⁴ In violation of this law and CALICA’s rights, PROFEPA failed to duly notify CALICA about the Shutdown Order in advance.³⁵⁵ On that day, PROFEPA personnel appeared at CALICA’s facilities without an order or warrant and imposed the shutdown.³⁵⁶

³⁴⁸ Shutdown Order, p. 280 (22 January 2018) (C-0117-SPA) (emphasis added); *see also* Expert Report-[REDACTED]-Environmental-Claimant’s Memorial-SPA, ¶ 177.

³⁴⁹ Shutdown Order, p. 278 (22 January 2018) (C-0117-SPA).

³⁵⁰ Expert Report-[REDACTED]-Environmental-Claimant’s Memorial-SPA, ¶¶ 174-176; Shutdown Order, pp. 1-14 (22 January 2018) (C-0117-SPA) (listing all the documents taken into consideration for the Shutdown, which do not include the studies that CALICA submitted).

³⁵¹ Shutdown Order, p. 280 (22 January 2018) (C-0117-SPA); Expert Report-[REDACTED]-Environmental-Claimant’s Memorial-SPA, ¶ 176.

³⁵² Expert Report-[REDACTED]-Environmental-Claimant’s Memorial-SPA, ¶¶ 176, n.115.

³⁵³ *Profepa clausura proyecto de la empresa Calica en Playa*, SIPSE.COM (24 January 2018) (C-0122-SPA).

³⁵⁴ Expert Report-[REDACTED]-Environmental-Claimant’s Memorial-SPA, ¶¶ 198-202.

³⁵⁵ *Id.*, ¶¶ 199-200.

³⁵⁶ Shutdown Order, p. 1 (22 January 2018) (C-0117-SPA); Expert Report-[REDACTED]-Environmental-Claimant’s Memorial-SPA, ¶ 202. In further violation of Mexican law, PROFEPA immediately thereafter announced the Shutdown Order publicly, even though CALICA had not been given an opportunity to be heard on this measure. Expert Report-[REDACTED]-Environmental-Claimant’s Memorial-SPA, ¶¶ 221-224; *Clausura PROFEPA Banco de Materiales, Propiedad de Calizas Industriales del Carmen, S.A. de C.V., en Solidaridad, Quintana Roo*, GOBIERNO DE MÉXICO (24 January 2018) (C-0123-SPA).

153. Following the shutdown, CALICA again challenged the methodology and instruments used by PROFEPA's inspectors.³⁵⁷ On 14 February 2018, as it had done with respect to the flawed first inspection, CALICA proffered to PROFEPA an expert report to explain these deficiencies.³⁵⁸ In November 2018 — almost a year after the shutdown and nine months after the expert report was offered — PROFEPA refused to consider CALICA's expert report, alleging that it had no connection with the substance of the inspection.³⁵⁹ This contention was baseless since the report squarely addressed the methodology employed during the "supplemental" inspection, and PROFEPA had admitted a similar expert report in connection with its flawed initial inspection.³⁶⁰ Under the circumstances, PROFEPA had no legal basis to disregard CALICA's expert report.³⁶¹

154. In its Shutdown Order, PROFEPA requested CALICA to provide a series of studies (georeferenced surveys and a bathymetric study) to determine CALICA's compliance with the extraction-area limit set forth in the Corchalito/Adelita Federal Environmental Authorization.³⁶² This request was puzzling since PROFEPA had already ordered the shutdown based on the allegation that the extraction-area limit was exceeded.³⁶³

³⁵⁷ CALICA's Observations to the Shutdown Order (14 February 2018) (C-0124-SPA).

³⁵⁸ *Id.*

³⁵⁹ PROFEPA Docket PFPA/4.1/2C.27.5/00028-17, pp. 6, 16-18 (30 October 2018) (C-0125-SPA) (rejecting an expert report prepared by a civil engineer on the basis that it was unrelated to PROFEPA's measures).

³⁶⁰ Expert Report- [REDACTED]-Environmental-Claimant's Memorial-SPA, ¶¶ 218-219; *see also id.*, ¶ 218 (noting that it is difficult to understand why PROFEPA contended that CALICA's expert report had no connection with the inspection, when (i) "PROFEPA determined to impose a shutdown based exclusively on the estimated or approximate measurement of an area," which was exactly what CALICA's expert report addressed; and (ii) PROFEPA "admitted an expert report for that purpose after the first inspection").

³⁶¹ *Id.*, ¶¶ 219-220; Mexican Federal Administrative Procedure Law, Article 50, available at: http://www.diputados.gob.mx/LeyesBiblio/pdf/112_180518.pdf (C-0110-SPA) (providing that "[a]ll kinds of evidence shall be accepted in administrative proceedings" and the "evidence proposed by the interested parties may only be rejected when it is not offered in accordance with the law, it has no connection with the substance of the matter, it is inappropriate and unnecessary or contrary to morality and law. Such a decision must be duly founded and reasoned.") (free translation, the original text reads: "En los procedimientos administrativos se admitirán toda clase de pruebas [...] [La autoridad] [s]ólo podrá rechazar las pruebas propuestas por los interesados cuando no fuesen ofrecidas conforme a derecho, no tengan relación con el fondo del asunto, sean improcedentes e innecesarias o contrarias a la moral y al derecho. Tal resolución deberá estar debidamente fundada y motivada.").

³⁶² Shutdown Order, p. 287 (22 January 2018) (C-0117-SPA).

³⁶³ *Id.*, pp. 286-87 (C-0117-SPA).

155. On 20 April 2018, CALICA submitted the requested studies, which showed that CALICA extracted limestone in El Corchalito below the 140-hectare limit. The studies further showed that CALICA's extraction volume and depth were well below the volume authorized by SEMARNAT. PROFEPA has ignored these studies for more than two years.³⁶⁴

156. Mexican law further required PROFEPA to identify the steps that CALICA could take to have the Shutdown Order lifted.³⁶⁵ PROFEPA stated that the shutdown could only be lifted if the Corchalito/Adelita Federal Environmental Authorization was amended to allow a larger extraction area.³⁶⁶ But SEMARNAT may not — under its binding procedural rules — approve such a request in light of PROFEPA's open administrative proceeding.³⁶⁷

157. CALICA is therefore facing a Catch-22 situation. PROFEPA has failed to resolve the case, even though it has been open for more than three years. The only way to lift the Shutdown Order and close PROFEPA's administrative proceeding is to accept PROFEPA's allegation that CALICA exceeded the extraction limit and to secure an amendment of the Corchalito/Adelita Federal Environmental Authorization. Yet this amendment cannot be secured while the administrative proceeding is open. PROFEPA has thus guaranteed the indefinite preservation of its Shutdown Order.³⁶⁸

158. PROFEPA further aggravated the dispute by taking the unusual step of filing a criminal complaint against CALICA in April 2018 alleging violations of the General Law of National Property. As of the date of this filing, the criminal proceeding remains open.³⁶⁹

159. More than three years have gone by since PROFEPA initiated the administrative proceeding within which the Shutdown Order was issued; a proceeding PROFEPA has deliberately refused to close, thus extending the shutdown indefinitely.³⁷⁰ As a result of these

³⁶⁴ Expert Report-[REDACTED]-Environmental-Claimant's Memorial-SPA, ¶ 230; Bathymetric study of the extraction area of CALICA in Quintana Roo, Mexico, p. 14 (February 2018) (C-0126-SPA).

³⁶⁵ Mexico's General Law of Ecological Balance, Article 170 BIS (CL-0127-SPA).

³⁶⁶ Shutdown Order, pp. 281-282 (22 January 2018) (C-0117-SPA); Expert Report-[REDACTED]-Environmental-Claimant's Memorial-SPA, ¶ 227.

³⁶⁷ Expert Report-[REDACTED]-Environmental-Claimant's Memorial-SPA, ¶ 251.

³⁶⁸ *Id.*, ¶¶ 253-255.

³⁶⁹ Mexico's General Law of National Property, Article 150 (C-0128-SPA) (prohibiting the use or exploitation of property belonging to Mexico without the required permit or authorization).

³⁷⁰ Expert Report-[REDACTED]-Environmental-Claimant's Memorial-SPA, ¶ 255.

measures, PROFEPA has cornered CALICA into a situation that can only be described as Kafkaesque: PROFEPA (i) determined — through a process riddled with irregularities — that CALICA has “probably” exceeded its extraction limits by about 1% based on “approximated” measurements; (ii) shut down operations at El Corchalito indefinitely based on this flawed proceeding; (iii) ordered CALICA to conduct two studies to determine whether the extraction limits were actually exceeded but has ignored those studies for over two years; and (iv) has given CALICA only one way to reverse the Shutdown Order — securing SEMARNAT’s amendment of the Corchalito/Adelita Federal Environmental Authorization — which is impossible to obtain while PROFEPA’s administrative proceeding against CALICA remains open.

III. LEGAL BASIS FOR ICSID JURISDICTION

160. This Tribunal has jurisdiction to adjudicate this dispute under NAFTA and the ICSID Convention. Article 25 of the Convention confers ICSID jurisdiction over “any legal dispute arising directly out of an investment, between a Contracting State [...] and a national of another Contracting State, which the parties to the dispute consent in writing to submit to the Centre.”³⁷¹ The dispute at issue in this arbitration (A) arises directly out of an investment (jurisdiction *ratione materiae*), (B) between Mexico (a Contracting State of the ICSID Convention) and Legacy Vulcan (a national of the United States, another Contracting State to the Convention) (jurisdiction *ratione personae*), and (C) the parties consented in writing to submit this dispute to ICSID arbitration (jurisdiction *ratione voluntatis*).

A. THE TRIBUNAL HAS JURISDICTION *RATIONE MATERIAE*

161. Article 25(1) of the ICSID Convention imposes two conditions *ratione materiae*: (i) that there be a legal dispute, and (ii) that this dispute arise directly out of an investment.³⁷² Both conditions are met here.

162. **Legal Dispute.** This case unquestionably concerns a legal dispute between Legacy Vulcan and Mexico. The term “dispute” has been defined as “a disagreement on a point of law or fact, a conflict of legal views or interests between the parties.”³⁷³ To be a “legal dispute,”

³⁷¹ ICSID Convention, Article 25(1) (C-0129-ENG).

³⁷² *Id.* (C-0129-ENG)

³⁷³ See, e.g., CHRISTOPH SCHREUER, THE ICSID CONVENTION: A COMMENTARY, Article 25, ¶ 42 (Cambridge University Press, 2009) (CL-0001-ENG) (hereinafter “Schreuer, ICSID Commentary”) (quoting *Mavrommatis Palestine Concessions*).

the controversy “must concern the existence or scope of a legal right or obligation, or the nature or extent of the reparation to be made for breach of a legal obligation.”³⁷⁴ The claims at issue here involve a disagreement or conflict of views between the Parties about their rights and obligations under NAFTA and international law, and the extent of the reparation owed by Mexico for its breaches of NAFTA.

163. ***The Dispute Arises Directly Out of Claimant’s Investments.*** As explained in Part II.C above, Legacy Vulcan has valuable investments in Mexico. The legal dispute at issue here arises directly out of those investments.

164. The term “investment” is not defined in the ICSID Convention but is defined in NAFTA. Within broad limits, the Convention left it to State parties to define what kinds of investments they wished to bring within the Convention’s scope.³⁷⁵ The Parties to NAFTA did so in their definition of “investment” in Chapter 11, which defines the term to include:

“(a) an enterprise [(i.e., ‘any entity constituted or organized under applicable law, whether or not for profit, and whether privately-owned or governmentally-owned, including any corporation, trust, partnership, sole proprietorship, joint venture or other association’)];³⁷⁶

[...]

(e) an interest in an enterprise that entitles the owner to share in income or profits of the enterprise;

[...]

(g) real estate or other property, tangible or intangible, acquired in the expectation or used for the purpose of economic benefit or other business purposes; and

(h) interests arising from the commitment of capital or other resources in the territory of a Party to economic activity in such territory, such as under

³⁷⁴ See, e.g., Report of the Executive Directors on Settlement of Investment Disputes between States and Nationals of Other States, in HISTORY OF THE ICSID CONVENTION, II-2, 1070, p. 1078 (CL-0002-ENG).

³⁷⁵ Schreuer, ICSID Commentary, Article 25, ¶ 121 (CL-0001-ENG); CAMPBELL McLACHLAN, LAURENCE SHORE & MATTHEW WEINIGER, INTERNATIONAL INVESTMENT ARBITRATION: SUBSTANTIVE PRINCIPLES, ¶ 6.05 (Oxford, 2007) (CL-0003-ENG).

³⁷⁶ NAFTA, Article 201 (C-0009-ENG) (defining “enterprise”).

(i) contracts involving the presence of an investor's property in the territory of the Party, including [...] concessions [...]."³⁷⁷

165. Legacy Vulcan's investments in Mexico satisfy the definition of "investment" in NAFTA. CALICA is a corporation constituted under the laws of Mexico and an "enterprise" under NAFTA that is indirectly owned and controlled by Legacy Vulcan.³⁷⁸ Among other investments, Legacy Vulcan also indirectly (i) owns and controls real estate in Mexico, including the Punta Venado port area and the limestone reserves in La Rosita, El Corchalito, and La Adelita, which were acquired for the sole purpose of developing the Project, and (ii) holds the CALICA Port Concession.³⁷⁹ Legacy Vulcan has also committed capital in Mexico in connection with the Project, including hundreds of millions of dollars to produce and export aggregates from the Project.³⁸⁰

166. The legal dispute at issue here arises directly from these investments. It centers around several adverse measures adopted by Mexico, including Mexico's repudiation of its obligation to amend the POEL, its failure to comply with a decision of its judiciary confirming that API Quintana Roo had unlawfully collected millions of dollars in port fees, and its unlawful shutdown of operations at El Corchalito.³⁸¹

B. THE TRIBUNAL HAS JURISDICTION *RATIONE PERSONAE*

167. Article 25(1) of the ICSID Convention also requires that the respondent State be a Contracting State to the Convention and that the claimant be a national of another Contracting State.³⁸² Both conditions are met here.

³⁷⁷ *Id.*, Article 1139 (C-0009-ENG) (defining "investment").

³⁷⁸ *See supra* ¶ 20; *see also* NAFTA, Article 1139 (C-0009-ENG) (defining "investment of an investor of a Party" as "an investment owned or controlled directly or indirectly by an investor of such Party.").

³⁷⁹ *See supra* ¶¶ 4, 23-29. Under Mexican law, quarrying activities are not subject to concessions and the petrous materials within a private property belong to the owner of that property. *See also* Expert Report- [REDACTED]-Environmental-Claimant's Memorial-SPA, ¶ 20.

³⁸⁰ *See supra* ¶¶ 28-38.

³⁸¹ *See infra* Part V (describing the legal basis of Legacy Vulcan's claims arising out of these measures).

³⁸² ICSID Convention, Article 25(1) (C-0129-ENG).

168. ***Respondent is a Contracting State.*** Mexico signed the ICSID Convention on 11 January 2018, and ratified it on 27 July 2018, with an effective date of 26 August 2018.³⁸³

169. ***Claimant is a National of Another Contracting State.*** Article 25(2) of the ICSID Convention defines “national of another Contracting State” as:

“(b) any juridical person which had the nationality of a Contracting State other than the State party to the dispute on the date on which the parties consented to submit such dispute to [...] arbitration [...]”.³⁸⁴

170. Legacy Vulcan qualifies as a “national of another Contracting State” because, as a Delaware corporation, it is a national of the United States of America, a State party to the ICSID Convention since 1966.³⁸⁵

C. THE TRIBUNAL HAS JURISDICTION *RATIONE VOLUNTATIS*

1. Respondent’s Consent to ICSID Jurisdiction

171. Mexico has expressed its written consent to submit investment disputes to ICSID arbitration in NAFTA Article 1122, which provides:

“1. Each Party consents to the submission of a claim to arbitration in accordance with the procedures set out in this Agreement.

2. The consent given by paragraph 1 and the submission by a disputing investor of a claim to arbitration shall satisfy the requirement of: (a) Chapter II of the ICSID Convention (Jurisdiction of the Centre) [...]”.³⁸⁶

172. Mexico’s consent to ICSID jurisdiction, expressed in NAFTA Article 1122, applies to claims that meet the requirements set forth in NAFTA Articles 1116(1) and 1117(1): (i) that the

³⁸³ *Database of ICSID Member States*, ICSID (18 February 2020), <https://icsid.worldbank.org/en/Pages/about/Database-of-Member-States.aspx> (C-0130-ENG) (hereinafter, the “ICSID List of Contracting States”). Legacy Vulcan served its Notice of Intent to Submit the Dispute to Arbitration pursuant to NAFTA Article 1119 and filed its Request for Arbitration on 3 September 2018 and 3 December 2018, respectively; after Mexico became a Contracting State to the ICSID Convention.

³⁸⁴ ICSID Convention, Article 25(2)(b) (C-0129-ENG). Article 25(2)(a), not quoted, refers to “natural person.”

³⁸⁵ ICSID List of Contracting States (C-0130-ENG); Copy of Certification of Formation of Legacy Vulcan, LLC (C-0001-ENG).

³⁸⁶ NAFTA, Article 1122 (C-0009-ENG).

claimant is an investor of a Party; (ii) that the dispute arises out of a breach of an obligation under NAFTA Chapter Eleven, Section A; and (iii) that the investor, or the enterprise on whose behalf the investor is submitting the claim, has incurred loss or damage by reason of that breach.³⁸⁷ Legacy Vulcan satisfies these conditions because (i) as a U.S. company, it is an investor of a Party; (ii) the dispute arises from Mexico's breach of the provisions of NAFTA Chapter Eleven, Section A, specified in Part V below; and (iii) as discussed in Part VI below, Legacy Vulcan and CALICA have incurred loss or damage by reason of that breach.

2. Claimant's Consent to ICSID Jurisdiction

173. In accordance with NAFTA Article 1121(1) and (2), Legacy Vulcan and CALICA consented to submit their dispute with Mexico to arbitration through their Notice of Intent to Submit a Claim to Arbitration under NAFTA Chapter 11, delivered to Mexico on 3 September 2018 (the "Notice of Intent"); their executed instrument of consent and waiver dated 3 December 2018 (the "Consent/Waiver Letter"); and the Request for Arbitration.³⁸⁸

* * *

174. The Tribunal has jurisdiction *ratione materiae*, *ratione personae*, and *ratione voluntatis*. It is therefore empowered to adjudicate this case under the ICSID Convention and NAFTA.

IV. ADMISSIBILITY OF THE CLAIMS

175. Legacy Vulcan has complied with all the admissibility requirements of NAFTA Chapter 11.³⁸⁹

A. THE CLAIMANT HAS COMPLIED WITH THE WAITING PERIOD AND NOTICE REQUIREMENTS UNDER NAFTA

176. Under NAFTA Article 1120(1), an investor may submit a claim to arbitration "provided that six months have elapsed since the events giving rise to [the] claim."³⁹⁰ More than

³⁸⁷ See *infra*, Parts V and VI.

³⁸⁸ Notice of Intent (3 September 2018) (C-0007-SPA); Consent/Waiver Letter (3 December 2018) (C-0008-ENG), and Request for Arbitration, ¶¶ 24, 28 (3 December 2018).

³⁸⁹ See NAFTA, Articles 1116-1122 (C-0009-ENG).

³⁹⁰ *Id.*, Article 1120(1) (C-0009-ENG) ("Except as provided in Annex 1120.1, and provided that six months have elapsed since the events giving rise to a claim, a disputing investor may submit the claim to arbitration under: (a) the ICSID Convention [...].").

six months elapsed between the events that gave rise to Legacy Vulcan's claims and their submission to arbitration. Legacy Vulcan filed its Request for Arbitration on 3 December 2018, and the measures that animate its claims — *i.e.*, Mexico's repudiation of the 2014 Agreements, shutdown of operations in El Corchalito, and disregard of the final ruling of its judiciary — occurred more than six months before that date.³⁹¹

177. NAFTA Article 1118 provides that the “disputing parties should first attempt to settle a claim through consultation or negotiation.”³⁹² As shown in Claimant's Notice of Intent and counsel's email of 4 March 2020, Legacy Vulcan and CALICA sought to settle this dispute with Respondent through consultations.³⁹³ Despite Claimant's good faith efforts to resolve the dispute amicably, Claimant and CALICA have been unable to settle their dispute with Respondent. Claimant intends to continue exploring alternatives to resolve this dispute amicably.

178. NAFTA Article 1119 provides that the disputing investor “shall deliver to the disputing Party written notice of its intention to submit a claim to arbitration at least 90 days before the claim is submitted” to arbitration.³⁹⁴ Legacy Vulcan delivered its Notice of Intent on 3 September 2018, more than 90 days before it submitted the Request for Arbitration on 3 December 2018.³⁹⁵

B. THE CLAIMANT HAS COMPLIED WITH THE WAIVER AND CONSENT REQUIREMENTS UNDER NAFTA

179. Legacy Vulcan also complied with the conditions for the submission of its claims to arbitration set forth in NAFTA Article 1121.

³⁹¹ See *supra* Part II.H.1 (explaining that Mexico failed to amend the POEL in breach of the 2014 Agreements by 5 December 2015); Part II.H.3 (explaining that Mexico shut down operations in El Corchalito and La Adelita in January 2018); and Part II.H.2 (explaining that Mexico refused to reimburse millions of dollars in port fees that Mexican courts ruled unlawful in January 2017).

³⁹² NAFTA, Article 1118 (C-0009-ENG) (“The disputing parties should first attempt to settle a claim through consultation or negotiation.”).

³⁹³ Notice of Intent (3 September 2018) (C-0007-SPA); see also E-mail from Miguel López Forastier (Covington & Burling) to Sara Marzal Yetano (ICSID) (4 March 2020) (C-0131-ENG) (“the Parties wish to extend all the relevant deadlines and dates in the Procedural Calendar in PO No. 1 (Annex A) by seventy days to explore the potential resolution of the dispute.”).

³⁹⁴ NAFTA, Article 1119 (C-0009-ENG) (“The disputing investor shall deliver to the disputing Party written notice of its intention to submit a claim to arbitration at least 90 days before the claim is submitted [...]”).

³⁹⁵ Notice of Intent (3 September 2018) (C-0007-SPA).

180. *First*, pursuant to NAFTA Article 1121(1) and (2), Legacy Vulcan and CALICA consented in writing to submit their dispute with Mexico to arbitration in the Consent/Waiver Letter.³⁹⁶ They ratified this consent in the Request for Arbitration.³⁹⁷

181. *Second*, in accordance with NAFTA Article 1121(1) and (2), in the Request for Arbitration and the Consent/Waiver Letter, Legacy Vulcan and CALICA expressly “waive[d] their right to initiate or continue before any administrative tribunal or court any proceedings with respect to the measures alleged to be in breach of NAFTA, except for proceedings seeking injunctive, declaratory, or other extraordinary relief, not involving the payment of damages, before an administrative tribunal or court under the laws of Mexico.”³⁹⁸

182. The Consent/Waiver Letter was delivered to Respondent and included in the Request for Arbitration as required by NAFTA Article 1121(3).

C. THE FORK-IN-THE-ROAD PROVISION IS INAPPLICABLE

183. The fork-in-the-road provision in NAFTA Annex 1120.1 has not been triggered here. This provision bars an investor from alleging in an arbitration that Mexico breached an obligation under NAFTA Chapter 11 if the investor or its Mexican enterprise have alleged in proceedings before a Mexican court or administrative tribunal that Mexico breached that obligation.³⁹⁹ Neither Legacy Vulcan nor CALICA has initiated proceedings before a Mexican court or administrative tribunal alleging that Mexico has breached its obligations under NAFTA Chapter 11. Legacy Vulcan, therefore, is not precluded by NAFTA Annex 1120.1 from pursuing its NAFTA claims in this arbitration.

³⁹⁶ Consent/Waiver Letter (3 December 2018) (C-0008).

³⁹⁷ Request for Arbitration, ¶ 24 (3 December 2018).

³⁹⁸ *Id.*; Consent/Waiver Letter (3 December 2018) (C-0008).

³⁹⁹ See NAFTA Annex 1120.1 (C-0009-ENG) (“With respect to the submission of a claim to arbitration: (a) an investor of another Party may not allege that Mexico has breached an obligation under: (i) Section A [of Chapter 11] [...], both in an arbitration under this Section and in proceedings before a Mexican court or administrative tribunal; and (b) where an enterprise of Mexico that is a juridical person that an investor of another Party owns or controls directly or indirectly alleges in proceedings before a Mexican court or administrative tribunal that Mexico has breached an obligation under: (i) Section A [of Chapter 11] [...], the investor may not allege the breach in an arbitration under this Section.”).

D. THE CLAIMS ARE TIMELY

184. NAFTA Articles 1116(2) and 1117(2) provide that an investor may not make a claim “if more than three years have elapsed from the date on which the investor [or its enterprise] first acquired, or should have first acquired, knowledge of the alleged breach and knowledge that the investor [or its enterprise] has incurred loss or damage.”⁴⁰⁰

185. Legacy Vulcan submitted its claims to arbitration less than three years after it and CALICA first acquired, or should have first acquired, knowledge of Mexico’s breaches of NAFTA Chapter 11 and of the losses or damage incurred from those breaches. The Request for Arbitration was filed on 3 December 2018. By 5 December 2015, less than three years earlier, Mexico was supposed to have amended the POEL to make operations in La Adelita possible but failed to do so and thereafter repudiated its obligation to do so.⁴⁰¹ In January 2017, less than two years before the Request for Arbitration was filed, Mexico’s Supreme Court affirmed a lower court ruling declaring that the port fees charged to CALICA were unlawful but Mexico thereafter disregarded this ruling by failing to reimburse those fees.⁴⁰² Finally, in January 2018, less than a year before the Request for Arbitration was filed, Mexico wrongfully shut down operations in El Corchalito and further barred operations in La Adelita.⁴⁰³ The claims asserted in this proceeding are therefore timely.

V. LEGAL BASIS FOR THE CLAIMS**A. APPLICABLE LAW**

186. Article 42(1) of the ICSID Convention provides that the “Tribunal shall decide a dispute in accordance with such rules of law as may be agreed by the parties.”⁴⁰⁴ NAFTA Article 1131 contains the Parties’ agreement on choice of law.⁴⁰⁵ Pursuant to that provision, the Tribunal “shall decide the issues in dispute in accordance with [NAFTA] and applicable rules of international law.”⁴⁰⁶ Accordingly, the provisions of NAFTA and, residually, other rules of

⁴⁰⁰ NAFTA, Articles 1116(2), 1117(2) (C-0009-ENG).

⁴⁰¹ *See supra*, Parts II.F and II.H.1.

⁴⁰² *See supra*, Part II.H.2.

⁴⁰³ *See supra*, Part II.H.3.

⁴⁰⁴ ICSID Convention, Article 42(1) (CL-0129-ENG).

⁴⁰⁵ Schreuer, ICSID Commentary, Article 42, ¶ 85 (CL-0001-ENG) (discussing NAFTA Article 1131).

⁴⁰⁶ NAFTA, Article 1131 (C-0009-ENG).

international law, including customary international law, govern this arbitration.⁴⁰⁷ Claimant does not base its claims on Mexican law, except insofar as necessary to set out the factual context of the dispute.

B. MEXICO FAILED TO ACCORD FAIR AND EQUITABLE TREATMENT TO LEGACY VULCAN’S INVESTMENTS

187. As discussed in Part V.B.1 below, NAFTA Article 1105 requires Mexico to accord investments of U.S. investors fair and equitable treatment in accordance with international law. Mexico has breached this obligation by engaging in arbitrary conduct and frustrating Legacy Vulcan’s legitimate expectations, as shown in Part V.B.2.

1. The Applicable Standard

188. Article 1105(1) establishes an obligation on each NAFTA Party to “accord to investments of investors of another Party treatment in accordance with international law, including fair and equitable treatment and full protection and security.”⁴⁰⁸ The minimum standard of treatment under customary international law, enshrined in Article 1105, is infringed by conduct that “is unjust, arbitrary, unfair, discriminatory or in violation of due process,”⁴⁰⁹ that involves a “complete lack of transparency and candour in an administrative process,”⁴¹⁰ or that contravenes the investor’s legitimate expectations.⁴¹¹ This standard “protects against all such acts or behavior that might infringe a sense of fairness, equity and reasonableness.”⁴¹²

⁴⁰⁷ *International Thunderbird Gaming Corporation v. United Mexican States*, UNCITRAL, Award, ¶ 90 (26 January 2006) (van den Berg (P), Wälde, Ariosa) (CL-0004-ENG) (hereinafter, “*Thunderbird v. Mexico* (Award)”).

⁴⁰⁸ NAFTA, Article 1105(1) (C-0009-ENG).

⁴⁰⁹ *Merrill and Ring Forestry L.P. v. Canada*, ICSID Case No. UNCT/07/1, Award, ¶ 208 (31 March 2010) (Orrego Vicuña (P), Dam, Rowley) (CL-0005-ENG) (hereinafter, “*Merrill & Ring v. Canada* (Award)”; see also *Mercer International Inc. v. Government of Canada*, ICSID Case No. ARB(AF)/12/3, Award, ¶ 7.57 (6 March 2018) (Veeder (P), Orrego Vicuña, Douglas) (CL-0006-ENG) (endorsing the reasoning of *Merrill & Ring*).

⁴¹⁰ *Waste Management v. United Mexican States (II)*, ICSID Case No. ARB(AF)/00/3, Award, ¶ 98 (30 April 2004) (Crawford (P), Civiletti, Magallón Gómez) (CL-0007-ENG) (hereinafter “*Waste Management v. Mexico* (Award)”; *Mobil Investments Canada Inc. and Murphy Oil Corporation v. Canada*, ICSID Case No. ARB(AF)/07/4, Decision on Liability and Principles of Quantum, ¶¶ 152(2), 171 (22 May 2012) (van Houtte (P), Sands, Janow) (CL-0008-ENG) (hereinafter “*Mobil v. Canada* (Award)”; *Bilcon of Delaware et al v. Government of Canada*, PCA Case No. 2009-04, Award on Jurisdiction and Liability, ¶ 442 (17 March 2015) (Simma (P), McRae, Schwartz) (CL-0009-ENG) (hereinafter, “*Bilcon v. Canada* (Award)”).

⁴¹¹ *Thunderbird v. Mexico* (Award), ¶ 147 (CL-0004-ENG).

⁴¹² *Merrill & Ring v. Canada* (Award), ¶ 210 (CL-0005-ENG).

189. In 2001, the NAFTA Free Trade Commission (“FTC”) issued Notes of Interpretation explaining that Article 1105 “prescribes the customary international law minimum standard of treatment of aliens as the minimum standard of treatment to be afforded to investments of investors of another Party.”⁴¹³ As the tribunal in *ADF v. United States* explained, “customary international law and the minimum standard of treatment of aliens it incorporates, are constantly in a process of development.”⁴¹⁴ Mexico itself has “agree[d] that customary international law evolves” and that “conduct which may not have violated international law [in] the 1920’s might very well be seen to offend internationally accepted principles today.”⁴¹⁵

190. It is well established that the content of the evolving minimum standard of treatment is shaped by the protections afforded by the fair and equitable treatment standard included in more than two thousand bilateral investment treaties. As the tribunal in *Mondev v. United States* concluded:

“In holding that Article 1105(1) refers to customary international law, the FTC interpretations incorporate current international law, whose content is shaped by the conclusion of more than two thousand bilateral investment treaties and many treaties of friendship and commerce. Those treaties largely and concordantly

⁴¹³ NAFTA FTC, Notes of Interpretation of Certain Chapter 11 Provisions, Section B(1) (31 July 2001) (C-0132-ENG).

⁴¹⁴ *ADF Group Inc. v. United States of America*, ICSID Case No. ARB(AF)/00/1, Award, ¶ 179 (9 January 2003) (Feliciano (P), de Mestral, Lamm) (CL-0010-ENG). See also *Mondev International Ltd. v. United States of America*, ICSID Case No. ARB(AF)/99/2, Award, ¶ 123 (11 October 2002) (Stephen (P), Crawford, Schwebel) (CL-0011-ENG) (hereinafter “*Mondev v. United States* (Award)”); see also *Waste Management v. Mexico* (Award), ¶ 93 (CL-0007-ENG); *GAMI Investments, Inc. v. Government of the United Mexican States*, UNCITRAL, Final Award, ¶¶ 95 *et seq.* (15 November 2004) (Paulsson (P), Reisman, Muró) (CL-0012-ENG) (hereinafter “*GAMI v. Mexico* (Award)”) (recognizing the evolution of customary international law as reflected in Article 1105 and noting that “*Neer* was decided more than half a century before NAFTA saw the light of day”); *Thunderbird v. Mexico* (Award), ¶ 194 (CL-0004-ENG) (“The content of the minimum standard should not be rigidly interpreted and should reflect evolving international customary law.”) (citation omitted); *Merrill & Ring v. Canada* (Award), ¶ 192 (CL-0005-ENG) (“the Tribunal is mindful of the evolutionary nature of customary international law [...] which provides scope for the interpretation of Article 1105(1), even in the light of the Free Trade Commission’s 2001 interpretation”).

⁴¹⁵ *ADF v. United States*, ICSID Case No. ARB(AF)/00/1, Mexico’s Second Article 1128 Submission, p. 11 (22 July 2002) (CL-0013-ENG) (“Mexico agrees that customary international law evolves.”); *Pope & Talbot Inc. v. Government of Canada*, UNCITRAL, Mexico’s Article 1128 Submission, ¶ 8 (3 December 2001) (CL-0014-ENG) (“Mexico also agrees that the [*Neer*] standard is relative and that conduct which may not have violated international law [in] the 1920’s might very well be seen to offend internationally accepted principles today.”).

provide for ‘fair and equitable’ treatment of, and for ‘full protection and security’ for, the foreign investor and his investments.”⁴¹⁶

191. Following the FTC’s interpretation, NAFTA tribunals have overwhelmingly held that this minimum standard of treatment “is infringed by conduct attributable to the State and harmful to the claimant if the conduct is arbitrary, grossly unfair, unjust or idiosyncratic[.]”⁴¹⁷ NAFTA tribunals have also held that a State engages in unfair and inequitable treatment when it frustrates an investor’s legitimate expectations derived from the State’s own conduct or representations.⁴¹⁸

192. As the minimum standard of treatment under customary international law has evolved, “NAFTA awards [have] ma[d]e it clear that [it] is not limited to conduct by host states that is outrageous. The contemporary minimum international standard involves a more significant measure of protection.”⁴¹⁹ Tribunals have recognized that this standard now affords foreign investors essentially the same level of protection as the autonomous fair and equitable treatment standard. In *Merrill & Ring v. Canada*, for example, the tribunal recognized that “fair and equitable treatment has become a part of customary law.”⁴²⁰

193. Non-NAFTA awards have reached the same conclusion. In *Biwater v. Tanzania*, for instance, the tribunal “accept[ed], as found by a number of previous arbitral tribunals and

⁴¹⁶ *Mondev v. United States* (Award), ¶ 125 (CL-0011-ENG).

⁴¹⁷ *Waste Management v. Mexico* (Award), ¶ 98 (CL-0007-ENG); *Mobil v. Canada* (Award), ¶¶ 152(2), 171 (CL-0008-ENG); *Bilcon v. Canada* (Award), ¶ 442 (CL-0009-ENG); *Mesa Power Group, LLC. v. Government of Canada*, PCA Case No. 2012-17, Award, ¶ 501 (26 March 2016) (Kaufmann-Kohler (P), Brower, Landau) (CL-0015-ENG); *Glamis Gold, Ltd. v. United States of America*, UNCITRAL, Award, ¶ 559 (8 June 2009) (Young (P), Caron, Hubbard) (CL-0016-ENG); *Cargill, Incorporated v. United Mexican States*, ICSID Case No. ARB(AF)/05/2, Award, ¶ 283 (18 September 2009) (Pryles (P), Caron, McRae) (CL-0017-ENG); *Merrill & Ring v. Canada* (Award), ¶¶ 199, 208 (CL-0005-ENG); *GAMI v. Mexico* (Award), ¶¶ 95 *et seq.* (CL-0012-ENG).

⁴¹⁸ *Thunderbird v. Mexico* (Award), ¶¶ 147, 195-196 (CL-0004-ENG); *Grand River Enterprises Six Nations, Ltd., et al. v. United States of America*, UNCITRAL, Award, ¶¶ 140-141 (12 January 2011) (Nariman (P), Crook, Anaya) (CL-0018-ENG) (hereinafter, “*Grand River v. United States* (Award)”); *Metalclad Corporation v. United Mexican States*, ICSID Case No. ARB(AF)/97/1, Award, ¶¶ 89, 99 (30 August 2000) (Lauterpacht (P), Siqueiros, Civiletti) (CL-0019-ENG) (hereinafter, “*Metalclad v. Mexico* (Award)”); *Mobil v. Canada* (Award), ¶ 152(3) (CL-0008-ENG); *Bilcon v. Canada* (Award), ¶ 455 (CL-0009-ENG).

⁴¹⁹ *Bilcon v. Canada* (Award), ¶ 433 (CL-0009-ENG).

⁴²⁰ *Merrill & Ring v. Canada* (Award), ¶ 211 (CL-0005-ENG); *id.*, ¶ 210 (“A requirement that aliens be treated fairly and equitably in relation to business, trade and investment is the outcome of this changing reality and as such it has become sufficiently part of widespread and consistent practice so as to demonstrate that it is reflected today in customary international law as *opinio juris*. In the end, the name assigned to the standard does not really matter.”).

commentators, that the actual content of the treaty standard of fair and equitable treatment is not materially different from the content of the minimum standard of treatment in customary international law.”⁴²¹ The tribunal in *CMS v. Argentina* similarly concluded that “the [t]reaty standard of fair and equitable treatment and its connection with the required stability and predictability of the business environment, founded on solemn legal and contractual commitments, is not different from the international law minimum standard and its evolution under customary law.”⁴²² This view has been shared by numerous other tribunals and commentators.⁴²³

194. Even if it were held that the minimum standard of treatment under Article 1105 has not evolved to the level of the autonomous fair and equitable treatment, Legacy Vulcan would

⁴²¹ *Biwater Gauff (Tanzania) Ltd. v. United Republic of Tanzania*, ICSID Case No. ARB/05/22, Award, ¶ 592 (24 July 2008) (Hanotiau (P), Landau, Born) (CL-0020-ENG); see also *Rumeli Telekom A.S. and Telsim Mobil Telekomunikasyon Hizmetleri A.S. v. Republic of Kazakhstan*, ICSID Case No. ARB/05/16, Award, ¶ 611 (29 July 2008) (Hanotiau (P), Lalonde, Boyd) (CL-0021-ENG); *Deutsche Bank AG v. Democratic Socialist Republic of Sri Lanka*, ICSID Case No. ARB/09/2, Award, ¶ 419 (31 October 2012) (Hanotiau (P), Williams, Ali Khan) (CL-0022-ENG) (sharing the view of numerous ICSID tribunals and commentators that the treaty standard of fair and equitable treatment is not materially different from the minimum standard of treatment under customary international law); *Valores Mundiales, S.L. et al. v. Bolivarian Republic of Venezuela*, ICSID Case No. ARB/13/11, Award, ¶ 536 (25 July 2017) (Zuleta (P), Grigera-Naón, Derains) (CL-0023-SPA) (hereinafter, “*Valores Mundiales v. Venezuela* (Award)”) (“the concept of ‘minimum standard of treatment’ has been expanded to such an extent that it now provides protection very similar to that accorded under the standard of fair and equitable treatment.”).

⁴²² *CMS Gas v. Argentine Republic*, ICSID Case No. ARB/01/8, Award, ¶ 284 (12 May 2005) (Orrego Vicuña (P), Rezek, Lalonde) (CL-0024-ENG) (hereinafter, “*CMS v. Argentina* (Award)”).

⁴²³ See, e.g., *Duke Energy Electroquil Partners & Electroquil S.A. v. Republic of Ecuador*, ICSID Case No. ARB/04/19, Award, ¶ 337 (18 August 2008) (Kaufman-Kohler (P), van den Berg, Gómez-Pinzón) (CL-0025-ENG); *Murphy Exploration & Production Company International v. Republic of Ecuador*, UNCITRAL, PCA Case No. 2012-16, Partial Final Award, ¶ 206 (6 May 2016) (Hanotiau (P), Derains, Hobér) (CL-0026-ENG) (hereinafter, “*Murphy v. Ecuador* (Award)”) (noting that the distinction between the treaty standard of fair and equitable treatment and customary international law is “more theoretical than substantial”); *Saluka Investments B.V. v. Czech Republic*, Partial Award, ¶ 291 (17 March 2006) (Watts (P), Yves Fortier, Behrens) (CL-0027-ENG) (hereinafter “*Saluka v. Czech Republic* (Award)”) (same); *Azurix Corp. v. Argentine Republic*, ICSID Case No. ARB/01/12, Award, ¶ 361 (14 July 2006) (Rigo Sureda (P), Lalonde, Martins) (CL-0028-ENG) (hereinafter, “*Azurix v. Argentina* (Award)”) (“the minimum requirement to satisfy this [autonomous FET standard] has evolved and [...] its content is substantially similar whether the terms are interpreted in their ordinary meaning, as required by the Vienna Convention, or in accordance with customary international law.”); Stephen Schwebel, *The Influence of Bilateral Investment Treaties on Customary International Law*, 98 Am. Soc’y Int’l. L. Proc. 27, p. 29-30 (2004) (CL-0029-ENG) (“[W]hen BITs prescribe treating the foreign investor in accordance with customary international law, they should be understood to mean the standard of international law embodied in the terms of some two thousand concordant BITs. The minimum standard of international law is the contemporary standard.”); Steffen Hindelang, *Bilateral Investment Treaties, Custom and a Healthy Investment Climate: The Question of Whether BITs Influence Customary International Law Revisited*, 5(5) J. World Investment & Trade 789, p. 805 (2004) (CL-0030-ENG).

still be entitled to the more favorable treatment that Mexico affords to investors of third States pursuant to other bilateral investment treaties (“BITs”) to which Mexico is a party. In NAFTA Article 1103, Mexico agreed to accord to investors of the United States, such as Legacy Vulcan, and their investments, such as CALICA, most-favored-nation (“MFN”) treatment:

“Each Party shall accord to Claimants [and investments of Claimants] of another Party treatment no less favorable than that it accords, in like circumstances, to investors of any other Party or of a non-Party with respect to the establishment, acquisition, expansion, management, conduct, operation, and sale or other disposition of investments.”⁴²⁴

195. Pursuant to Mexico’s Schedule to NAFTA Annex IV, the MFN obligation enshrined in Article 1103 applies when the more favorable treatment is granted through treaties of Mexico that went into effect or were signed *after* NAFTA entered into force.⁴²⁵ As one NAFTA tribunal put it: “under Article 1105, every NAFTA investor is entitled, by virtue of Article 1103, to the treatment accorded [to] nationals of other states under BITs containing the fairness elements unlimited by customary international law. The [FTC Interpretation] did not purport to change that fact, nor could it.”⁴²⁶ The tribunal in *UPS v. Canada* similarly emphasized the “likely availability to the investor of the protection of the most favoured nation obligation in article 1103, by reference to other bilateral investment treaties.”⁴²⁷

⁴²⁴ NAFTA, Article 1103 (C-0009-ENG).

⁴²⁵ NAFTA, Annex IV - Schedule of Mexico: Exceptions from Most-Favored-Nation Treatment (Chapter 11) (C-0133-ENG) (“Mexico takes an exception to Article 1103 for treatment accorded under all bilateral or multilateral international agreements in force or signed prior to the date of entry into force of this Agreement. For international agreements in force or signed after the date of entry into force of this Agreement, Mexico takes an exception to Article 1103 for treatment accorded under those agreements involving: (a) aviation; (b) fisheries; (c) maritime matters, including salvage; or (d) telecommunications.”) (emphasis added).

⁴²⁶ *Pope & Talbot Inc. v. Government of Canada*, UNCITRAL, Damages Award, n.54 (31 May 2002) (Dervaird (P), Greenberg, Belman) (CL-0031-ENG) (hereinafter, “*Pope & Talbot v. Canada* (Damages)”); see also *ICS Inspection and Control Services Limited (United Kingdom) v. Argentine Republic*, PCA Case No. 2010-09, Award on Jurisdiction, ¶ 286 (10 February 2012) (Dupuy (P), Torres Bernárdez, Lalonde) (CL-0032-ENG) (recognizing that “treatment” in MFN clauses encompasses substantive treatment provisions). When MFN is invoked to import a more favorable clause from a third-country BIT, “being described as an ‘investor’ under the basic treaty seems to be enough to be considered as being in like circumstances to investors in the third-country BIT invoked.” INTERNATIONAL INSTITUTE FOR SUSTAINABLE DEVELOPMENT – THE MOST-FAVORED-NATION CLAUSE IN INVESTMENT TREATIES, p. 20 (IISD, 2017) (CL-0033-ENG); see also UNITED NATIONS CONFERENCE ON TRADE AND DEVELOPMENT, MOST-FAVORED-NATION TREATMENT, p. 64 (United Nations, 2010) (CL-0034-ENG).

⁴²⁷ *United Parcel Service of America Inc. v. Government of Canada*, ICSID Case No. UNCT/02/1, Award on Jurisdiction, ¶ 97 (22 November 2002) (Keith (P), Yves Fortier, Cass) (CL-0035-ENG).

196. Multiple scholars have endorsed this view.⁴²⁸ For example, Professor Dumberry, who used to work for Canada's Ministry of Foreign Affairs and Commerce, has stated that, in the case of a NAFTA dispute with Mexico, an investor could invoke NAFTA Article 1103 to import the more favorable fair and equitable treatment standard from "a number of treaties entered into by Mexico."⁴²⁹

197. Mexico's BITs with Korea, Germany, Greece, and the Netherlands, all of which postdate NAFTA, contain autonomous fair and equitable treatment provisions.⁴³⁰ Accordingly,

⁴²⁸ IOANA TUDOR, *THE FAIR AND EQUITABLE TREATMENT STANDARD IN THE INTERNATIONAL LAW OF FOREIGN INVESTMENT*, p. 192 (Oxford University Press, 2008) (CL-0036-ENG) (hereinafter, "Tudor, The FET Standard") (noting that the importation of a better fair and equitable treatment standard through NAFTA Article 1103 is supported by the object of NAFTA in encouraging foreign investment); STEPHAN SCHILL, *THE MULTILATERALIZATION OF INTERNATIONAL INVESTMENT LAW*, p. 142 (Cambridge University Press, 2009) (CL-0037-ENG) ("the reaction of arbitral tribunals to the FTC's interpretation of fair and equitable treatment under Article 1105 [of] NAFTA illustrates that MFN clauses elevate the level of protection in any given host State to the maximum level granted in any of that State's investment treaties.").

⁴²⁹ Patrick Dumberry, *The Importation of "Better" Fair and Equitable Treatment Standard Protection Through MFN Clauses: An analysis of NAFTA Article 1103*, 14(1) TDM 1, pp. 2, 13-14 (2017) (CL-0038-ENG) ("MFN clauses allow for the importation of better substantive rights contained in other treaties entered into by the host State." With respect to whether the importation of better FET clauses in treaties entered into by the NAFTA Parties with other States should be allowed, "[m]y conclusion is that such an importation is in fact possible regarding [...] a number of treaties entered into by Mexico."); see also Charles Brower II, *Investor-State Disputes under NAFTA: The Empire Strikes Back*, 40(1) Colum. J. Transnat'l L. 43, n.71 (2001) (CL-0039-ENG) ("Assuming that the Notes of Interpretation constitute a binding interpretation of Article 1105(1), NAFTA investors may still argue that Article 1103 entitles them to a level of 'fair and equitable treatment' that exceeds the requirements of customary international law."); Todd Weiler, *NAFTA Investment Arbitration and the Growth of International Economic Law*, 2002(2) Bus L Int'l 158, p. 187 (CL-0040-ENG) ("Under Article 1103, investors with a claim against Mexico could receive exactly the same treatment that they would have been able to receive under NAFTA Article 1105 had the Commission never issued its statement."); Todd Weiler, *NAFTA Investment Law in 2001: As the Legal Order Starts to Settle, the Bureaucrats Strike Back*, 36(2) Int'l Lawyer 345, p. 347 (2002) (CL-0041-ENG).

⁴³⁰ Agreement between the Government of the United Mexican States and the Government of the Republic of Korea for the Promotion and Reciprocal Protection of Investments, signed on 14 November 2000, in force as of 6 July 2002 (C-0134-ENG) ("2.2 Investments made by investors of each Contracting Party shall at all times be accorded fair and equitable treatment and shall enjoy full protection and security in the territory of the other Contracting Party."); Agreement between the United Mexican States and the Federal Republic of Germany on the Promotion and Reciprocal Protection of Investments, signed on 25 August 1998, in force as of 23 February 2001 (C-0135-ENG) ("2.3 Each Contracting State shall in any case accord investments of the other Contracting State fair and equitable treatment."); Agreement between the Government of the United Mexican States and the Government of the Hellenic Republic on the Promotion and Reciprocal Protection of Investments, signed on 30 November 2000, in force as of 17 September 2002 (C-0136-ENG) ("3.2 Investments of investors of a Contracting Party shall, at all times, be accorded fair and equitable treatment and shall enjoy full protection and security in the territory of the other Contracting Party."); Agreement on Promotion, Encouragement and Reciprocal Protection of Investments Between the Kingdom of the Netherlands and the United Mexican States, signed on 13 May 1998, in force as of 1 October 1999 (C-0137-ENG) ("3.1 Each Contracting Party shall ensure fair and equitable treatment of the investments of nationals of the other Contracting Party and shall not impair, by unjustifiable or

even if the protection afforded by Article 1105 were found to be more restrictive than that afforded under those BITs, Legacy Vulcan would be entitled to the same level of protection afforded by the fair and equitable treatment provisions of those BITs and may import them here by virtue of NAFTA Article 1103.

198. Measured against either the minimum standard of treatment under customary international law, as it has been interpreted by NAFTA tribunals, or the autonomous standard imported from these BITs, Mexico's conduct here falls short.

2. Mexico's Unfair and Inequitable Treatment of Legacy Vulcan's Investments

199. Mexico failed to accord fair and equitable treatment to Legacy Vulcan and its investments by engaging in arbitrary conduct and by frustrating Legacy Vulcan's legitimate expectations. Mexico undertook the obligation to amend the POEL by 5 December 2015 to allow CALICA to commence operations in La Adelita — CALICA's largest untapped lot. Legacy Vulcan invested hundreds of millions of dollars in the expectation that this obligation would be fulfilled, but Mexico repudiated it for political reasons. Mexico then went further by shutting down CALICA's operations in El Corchalito in January 2018 — soon after threatening to do so in retaliation for CALICA's exercise of its rights pursuant to a court ruling that Mexico has ignored for more than three years. The unlawful closure of the site was also marred by myriad irregularities, based on a flawed inspection, and completed without giving CALICA an opportunity to be heard on the matter. Mexico's conduct violates NAFTA Article 1105.

a) Mexico's Measures Are Arbitrary

200. NAFTA tribunals have consistently held that Article 1105 protects investors against conduct that is arbitrary, and Mexico itself has recognized that the "fair and equitable treatment standard requires [Mexico] to act in good faith, reasonably, without abuse, arbitrariness or discrimination."⁴³¹ Conduct is arbitrary if it is "founded on prejudice or preference rather than

discriminatory measures, the operation, management, maintenance, use, enjoyment or disposal thereof by those nationals."). NAFTA entered into force on 1 January 1994.

⁴³¹ *Metalclad Corporation v. United Mexican States*, ICSID Case No. ARB(AF)/97/1, Mexico's Counter-Memorial, ¶ 841 (22 May 1998) (CL-0042-ENG); see also *Waste Management v. Mexico* (Award), ¶ 98 (CL-0007-ENG); *Bilcon v. Canada* (Award), ¶¶ 442, 591 (CL-0009-ENG) (endorsing *Waste Management* and emphasizing that NAFTA Article 1105 is infringed by arbitrary conduct).

on reason or fact.”⁴³² “A measure that inflicts damage on the investor without serving any legitimate purpose and without a rational explanation, but that instead rests on prejudice or bias, would be considered arbitrary.”⁴³³

201. In accordance with these principles, tribunals have considered the following conduct as arbitrary and contrary to fair and equitable treatment: (i) conduct that is politically motivated;⁴³⁴ (ii) conduct contrary to due process and good faith;⁴³⁵ and (iii) conduct that infringes the rule of law.⁴³⁶ Mexico’s conduct here falls within these categories.

(1) Mexico’s Conduct Was Politically Motivated

202. State conduct is arbitrary when it is not based on facts and legal norms but is rather based on domestic politics and discretion.⁴³⁷ Mexico has been found to be in breach of its

⁴³² UNITED NATIONS CONFERENCE ON TRADE AND DEVELOPMENT, FAIR AND EQUITABLE TREATMENT, p. 78 (United Nations, 2012) (CL-0043-ENG) (hereinafter, “UNCTAD, Fair and Equitable Treatment”); *see also* *Ronald Lauder v. Czech Republic*, UNCITRAL, Award, ¶221 (3 September 2001) (Briner (P), Klein, Cutler) (CL-0044-ENG); *Plama Consortium Limited v. Republic of Bulgaria*, ICSID Case No. ARB/03/24, Award, ¶ 184 (27 August 2008) (Salans (P), van den Berg, Veeder) (CL-0045-ENG).

⁴³³ UNCTAD, Fair and Equitable Treatment, p. 78 (CL-0043-ENG).

⁴³⁴ *Eureko B.V. v. Republic of Poland*, UNCITRAL, Partial Award, ¶ 233 (19 August 2005) (Yves Fortier (P), Schwebel, Rajske) (CL-0046-ENG) (hereinafter, “*Eureko v. Poland* (Award)”) (“The Tribunal has found that [Poland], by the conduct of organs of the State, acted not for cause but for purely arbitrary reasons linked to the interplay of Polish politics and nationalistic reasons of a discriminatory character.”).

⁴³⁵ *Waste Management v. Mexico* (Award), ¶ 98 (CL-0007-ENG); *Abengoa, S.A. y COFIDES, S.A. v. United Mexican States*, ICSID Case No. ARB(AF)/09/2, Award, ¶¶ 643-644 (Mourre (P), Siqueiros, Fernández-Armesto) (CL-0047-SPA) (hereinafter, “*Abengoa v. Mexico* (Award)”) (“The Arbitral Tribunal also considers that the minimum standard of treatment in accordance with customary international law is an expression of and a constituent part of the principle of good faith. [...] Many awards have referred to the principle of good faith in assessing the State’s compliance with its fair and equitable treatment obligations.”) (free translation, the original text reads: “El Tribunal Arbitral estima también que el nivel mínimo de trato acorde con el derecho internacional consuetudinario es una expresión y parte constitutiva del principio de buena fe. [...] Numerosos laudos se han referido al principio de buena fe para valorar el respeto de la obligación de trato por parte del Estado.”) (citations omitted).

⁴³⁶ *Waguih Elie George Siag and Clorinda Vecchi v. Arab Republic of Egypt*, ICSID Case No. ARB/05/15, Award, ¶¶ 453-454 (1 June 2009) (Williams (P), Pryles, Orrego Vicuña) (CL-0048-ENG) (hereinafter “*Siag v. Egypt* (Award)”); *OI European Group B.V. v. Bolivarian Republic of Venezuela*, ICSID Case No. ARB/11/25, Award, ¶ 491 (10 March 2015) (Fernández-Armesto, Orrego Vicuña, Mourre) (CL-0049-ENG) (hereinafter, “*OI European v. Venezuela* (Award)”).

⁴³⁷ Rudolph Dolzer, *Fair and Equitable Treatment: Today’s Contours*, 12(1) Santa Clara J. Int’l L. 7, p. 31 (2014) (CL-0050-ENG) (hereinafter, “Dolzer, *FET Contours*”) (“fair and equitable treatment will stand in the way of conduct of the host state that is driven by domestic politics instead of arising out of considerations related to the investment. Governmental action will also be suspect in case it is not based on a proper review of facts relevant to a decision.”); Christoph Schreuer, *Protection against Arbitrary or Discriminatory Measures*, in *THE FUTURE OF INVESTMENT ARBITRATION*, 183, p. 188 (R. Alford, C. Rogers,

international obligations for engaging in this type of conduct before. In *Abengoa v. Mexico*, for example, the investors in a waste-processing facility were granted the necessary permits to operate but faced opposition from a local community faction. The leader of this faction promised to close the facility as part of his electoral campaign for mayor and got elected. Once in office, he withdrew the permits, alleging public health and environmental concerns. The tribunal held that this measure was arbitrary and in breach of the minimum standard of treatment because the justifications for the facility's closure were artificial and premised on politics rather than on legitimate environmental and public health considerations.⁴³⁸

203. Similarly, in *Tecmed v. Mexico*, the tribunal held Mexico in breach of the fair and equitable treatment standard when “[t]he refusal to renew the [claimant’s] Permit [to operate a landfill] [...] was actually used to permanently close down a site whose operation had become a nuisance due to political reasons relating to the community’s opposition [...].”⁴³⁹

204. Mexico’s failure to amend the POEL pursuant to the 2014 Agreements — effectively precluding CALICA from initiating operations in La Adelita — was similarly based on political motivations and discretion, not on facts or legal norms. In the MOU, the State of Quintana Roo and the Municipality of Solidaridad agreed to amend the POEL “for the inclusion of ‘mining and exploitation of petrous material’ at [...] ‘La Adelita.’”⁴⁴⁰ They further confirmed this obligation in the Amended MOU, where they pledged that the POEL would be amended by 5 December 2015.⁴⁴¹ While the Municipality of Solidaridad took initial steps to meet its obligations, it abandoned the POEL amendment process abruptly and without justification.⁴⁴² Mexican officials thereafter

eds. 2009) (CL-0051-ENG) (stating a measure will be arbitrary “where a public interest is put forward as a pretext to take measures that are designed to harm the investor.”).

⁴³⁸ *Abengoa v. Mexico* (Award), ¶¶ 647-652, 672 (CL-0047-SPA).

⁴³⁹ *Técnicas Medioambientales Tecmed, S.A. v. United Mexican States*, ICSID Case No. ARB (AF)/00/2, Award, ¶ 164 (29 May 2003) (Grigera Naón (P), Fernández Rosas, Bernal Vereja) (CL-0052-ENG) (hereinafter, “*Tecmed v. Mexico* (Award)”). See also *id.*, ¶¶ 158-165; *EDF (Services) Limited v. Romania*, ICSID Case No. ARB/05/13, Award, ¶ 303 (8 October 2009) (Bernardini (P), Derains, Rovine) (CL-0053-ENG) (adopting Prof. Schreuer’s definition of arbitrary measures as “a measure that is not based on legal standards but on discretion, prejudice or personal preference”); *Tza Yap Shum v. Republic of Peru*, ICSID Case No. ARB/07/6, Award ¶ 188 (7 July 2011) (Kessler (P), Fernández-Armesto, Otero) (C-0054-SPA) (citing Prof. Schreuer’s definition of arbitrary measures and the tribunal’s decision in *EDF v. Romania* adopting such definition).

⁴⁴⁰ MOU (12 June 2014) (C-0021-SPA).

⁴⁴¹ Amended MOU, p. 2 (13 May 2015) (C-0022-SPA).

⁴⁴² See *supra* ¶¶ 114-131.

admitted that they reneged on their obligation to amend the POEL simply because they deemed it politically unwise to comply.⁴⁴³ And on 17 July 2018, the State of Quintana Roo expressly confirmed its repudiation of its obligation to amend the POEL when the Governor emphatically told [REDACTED]: “You are not entering La Adelita — period.”⁴⁴⁴

205. There is abundant evidence in the record that Mexico’s conduct was arbitrary because it was driven by politics, not a legitimate factual or legal basis:

- On 28 January 2016, the same day that the Committee to Amend the POEL approved the diagnostic report from its appointed expert identifying CALICA’s lots as the most suitable areas for quarrying, then Solidaridad councilwoman and now Mayor Laura Beristain publicly expressed her opposition to “land use changes” in the POEL via Twitter, using the “#STOPCALICA” hashtag.⁴⁴⁵ Not long thereafter, the Committee suddenly stopped convening, bringing the POEL amendment process to an abrupt and unexplained end.⁴⁴⁶
- On 17 August 2016, Solidaridad’s then Mayor-elect Cristina Torres told [REDACTED] that the Municipality of Solidaridad and the State of Quintana Roo would not comply voluntarily with the 2014 Agreements to avoid confrontation with the hotel industry and environmental groups which allegedly opposed CALICA’s operations.⁴⁴⁷
- In March 2017, the Governor of the State of Quintana Roo, Carlos Joaquín, told [REDACTED] that it would be politically “unpalatable” to allow CALICA to quarry La Adelita and that he was under pressure from the tourism industry to develop CALICA’s lots.⁴⁴⁸
- On 3 April 2017, the Legislature of the State of Quintana Roo approved a non-binding Point of Agreement introduced by Beristain, urging that the POEL not be amended to allow CALICA to quarry La Adelita. Beristain premised her Point of Agreement on the false and incendiary allegation that CALICA was supplying materials to build a wall along the U.S.-Mexico border.⁴⁴⁹

⁴⁴³ Witness Statement-[REDACTED]-Claimant’s Memorial-ENG, ¶ 59 (“Governor Joaquín said that, even though the law is on CALICA’s side, it was not viable politically to change La Adelita’s existing zoning category to one that expressly allows extraction. He added that ‘interested parties’ might resort to activism and social opposition, including contacting the national press.”).

⁴⁴⁴ *Id.*

⁴⁴⁵ *See supra* n.281.

⁴⁴⁶ *See supra* ¶ 120.

⁴⁴⁷ *See supra* ¶ 123.

⁴⁴⁸ *See supra* ¶ 125.

⁴⁴⁹ *See supra* ¶ 126.

- Two days later, on 5 April 2017, Solidaridad's Mayor publicly denied that CALICA had asked the Municipality of Solidaridad to comply with its obligation to amend the POEL, ignoring previous meetings with CALICA discussing this very issue.⁴⁵⁰
- On 20 June 2017, the Secretary of Ecology and Environment of the State of Quintana Roo acknowledged that there were no technical objective issues with CALICA's planned operations in La Adelita but that vested interests were using unfounded allegations against CALICA to advance their agendas.⁴⁵¹
- In August 2017, Governor Joaquín emphasized that amending the POEL would be politically difficult despite the lack of any technical, objective issues with CALICA's planned activities in La Adelita.⁴⁵²
- On 2 January 2018, CALICA made a court filing to preserve its right to recover the millions that API Quintana Roo had unlawfully collected in port fees. On 19 January 2018, API Quintana Roo threatened [REDACTED] with a shutdown of CALICA's operations if [REDACTED] not withdraw these efforts. This threat materialized five days later with PROFEPA's order prohibiting CALICA's operations in El Corchalito and La Adelita.⁴⁵³
- In July 2018, Governor Joaquín reaffirmed that amending the POEL was not politically viable despite "the law being on CALICA's side" because interested parties could resort to activism and social opposition and bluntly declared that CALICA "[is] not entering La Adelita — period."⁴⁵⁴
- In September 2018, Beristain was elected Mayor of the Municipality of Solidaridad, and her administration predictably has done nothing to amend the POEL in accordance with the 2014 Agreements. To the contrary, Beristain's administration has continued to be ideologically opposed to CALICA, as illustrated by the protest held at the entrance of CALICA's facilities by a chainsaw-wielding political ally and member of her team, "Chano" Toledo.⁴⁵⁵
- In March 2020, "Chano" Toledo continued his public attacks against CALICA.⁴⁵⁶

⁴⁵⁰ See *supra* ¶ 127.

⁴⁵¹ See *supra* ¶ 128.

⁴⁵² See *supra* ¶ 129.

⁴⁵³ See *supra* ¶¶ 133-135.

⁴⁵⁴ See *supra* ¶ 131.

⁴⁵⁵ See *supra* ¶ 136.

⁴⁵⁶ *Aunque Calica se llame Sac Tun, sigue siendo una empresa ecocida: 'Chano' Toledo*, PEDRO CANCHÉ NOTICAS (8 March 2020) (C-0109-SPA) (noting that Chano Toledo "owns land in areas adjacent to CALICA and has staged various protests against this company over the years").

206. These facts show that Mexico's conduct was not only arbitrary — it was manifestly arbitrary — in denying the very act that it obligated itself to perform by 5 December 2015.⁴⁵⁷ It did so by bringing the process to amend the POEL to an abrupt and unexplained end in 2016, and thereafter refusing to complete this process out of the political and ideological caprice of local elected officials. These officials even admitted to CALICA that, although “the law was on [its] side” and there were no technical or legal reasons for reneging on the 2014 Agreements, CALICA would be prevented from quarrying its largest lot due to political convenience.⁴⁵⁸ On these facts, the Respondent has clearly engaged in arbitrary conduct in violation of NAFTA Article 1105.

(2) Mexico's Conduct Was Contrary to Due Process

207. The obligation to accord fair and equitable treatment requires States to act in accordance with due process.⁴⁵⁹ A core element of due process is the right to be heard — the ability to present a position for consideration by governmental bodies in their decision-making relating to measures affecting investments. In *Metalclad v. Mexico*, the tribunal found that Mexico denied the investor due process by precluding its participation at a municipal-council meeting in which a key permit was denied.⁴⁶⁰ A similar failing was found in *Tecmed v. Mexico*, due to the authorities' refusal to allow the investor to present its position on the renewal of a permit.⁴⁶¹

⁴⁵⁷ Hence, even if the applicable standard were that of manifest arbitrariness, Mexico's conduct here rose to that level. See *Thunderbird v. Mexico* (Award), ¶ 194 (CL-0004-ENG) (“The content of the minimum standard should not be rigidly interpreted and it should reflect evolving international customary law. [...] For the purposes of the present case, the Tribunal views acts that would give rise to a breach of the minimum standard of treatment prescribed by the NAFTA and customary international law as those that, weighed against the given factual context, amount to [...] manifest arbitrariness falling below acceptable international standards.”) (citations omitted).

⁴⁵⁸ Witness Statement-[REDACTED]-Claimant's Memorial-ENG, ¶ 59.

⁴⁵⁹ Christoph Schreuer, *Fair and Equitable Treatment in Arbitral Practice*, 6(3) JWIT 357, p. 381 (2005) (CL-0055-ENG) (hereinafter, “Schreuer, *Fair and Equitable Treatment*”) (“Procedural fairness is an elementary requirement of the rule of law and a vital element of fair and equitable treatment. [...] This duty may be violated not only by the courts but also through executive action”); *Waste Management v. Mexico* (Award), ¶ 98 (CL-0007-ENG) (the FET standard protects investors from “conduct [...] which] is arbitrary, grossly unfair, unjust [...], or involves a lack of due process leading to an outcome which offends judicial propriety — as might be the case with [...] a complete lack of transparency and candour in an administrative process”) (emphasis added); *Tecmed v. Mexico* (Award), ¶ 162 (CL-0052-ENG); *Frontier Petroleum Services Ltd. v. Czech Republic*, UNCITRAL, Award, ¶ 328 (12 November 2010) (Williams (P), Álvarez, Schreuer) (CL-0056-ENG) (hereinafter, “*Frontier v. Czech Republic* (Award)”) (“procedural propriety and due process are well-established principles under the standard of fair and equitable treatment.”).

⁴⁶⁰ *Metalclad v. Mexico* (Award), ¶ 91 (CL-0019-ENG).

⁴⁶¹ *Tecmed v. Mexico* (Award), ¶ 162 (CL-0052-ENG); see also *Glencore International A.G. and C.I. Prodeco S.A. v. Republic of Colombia*, ICSID Case No. ARB/16/6, Award, ¶ 1318 (27 August 2019) (Fernández-Armesto (P), Garibaldi, Thomas) (CL-0057-ENG) (hereinafter, “*Glencore v. Colombia*”).

208. Mexico similarly denied due process to Legacy Vulcan and CALICA by denying them the opportunity to demonstrate within PROFEPA's administrative proceeding that PROFEPA's Shutdown Order is unfounded. Even though CALICA had the right under Mexican law to show through an expert that the findings of PROFEPA's inspectors were flawed, PROFEPA disallowed such a submission — without any legitimate basis — almost a year after the shutdown and nine months after the expert report was offered.⁴⁶²

209. PROFEPA also predetermined that CALICA purportedly exceeded extraction limits by approximately 1% before receiving the georeferenced surveys and bathymetric study it requested to assess precisely whether the extraction limits had in fact been exceeded.⁴⁶³ After it received those studies — showing that, in fact, no limits were exceeded — PROFEPA simply ignored them.⁴⁶⁴

210. PROFEPA created a situation in which CALICA can only escape the shutdown — regardless of what technical studies show — if it first concedes the purported violation on which the shutdown is based. According to PROFEPA, to close the administrative proceeding and lift the Shutdown Order, CALICA must first admit that it exceeded the extraction limits set forth in the Corchalito/Adelita Federal Environmental Authorization by requesting that those limits be extended in a modified authorization.⁴⁶⁵ But no extraction limits were in fact exceeded and CALICA may only obtain such a modification from SEMARNAT once PROFEPA closes the administrative proceeding, effectively preserving the shutdown — a purportedly precautionary measure — indefinitely.⁴⁶⁶

211. PROFEPA also failed to duly notify CALICA of the Shutdown Order, as it was required to do under Mexican law, to shut down operations. PROFEPA officials instead showed

(Award)”) (“[t]he rule of law requires that in [...] administrative proceedings [...] due process be respected: the [...] administrative authority, must give each party a fair opportunity to present its case and to marshal appropriate evidence, and then must assess the submissions and the evidence in a reasoned, even-handed, and unbiased decision.”) (citation omitted).

⁴⁶² See *supra* ¶ 153.

⁴⁶³ See *supra* ¶ 154.

⁴⁶⁴ See *supra* ¶ 155.

⁴⁶⁵ See *supra* ¶ 157.

⁴⁶⁶ See *supra* ¶ 156. Mexico further denied Legacy Vulcan and CALICA due process by failing to invite CALICA to participate in a new process commenced in 2019 by the Municipality of Solidaridad to amend the POEL. See *supra* n.293.

up at CALICA's facility — without the required order or warrant — and imposed the shutdown.⁴⁶⁷ Failures to provide adequate notice of adverse measures have been held to breach the fair and equitable treatment standard.⁴⁶⁸

212. A State also engages in conduct that is contrary to due process and thus arbitrary when it fails to provide adequate reasons for its decisions.⁴⁶⁹ “A lack of reasons may be relevant to assess whether a given decision was arbitrary and whether there was lack of due process in administrative proceedings.”⁴⁷⁰ Mexico's shutdown of CALICA's operations in El Corchalito suffered from this deficiency.

213. As explained in [REDACTED] expert report, under Mexican law, a shutdown order requires a finding of imminent risk of damage to natural resources.⁴⁷¹ PROFEPA did not justify the Shutdown Order on an imminent risk of damage. Instead, it premised the shutdown on the “probable” non-compliance with the Corchalito/Adelita Federal Environmental Authorization, resulting from the “alleged” excess extraction of approximately 1% over the limit.⁴⁷² This is a legally deficient ground for PROFEPA's disproportionate order.⁴⁷³ These facts are materially analogous to those in *Metalclad v. Mexico*, where the tribunal held that Mexico's denial of a construction permit on grounds that were beyond the scope of those legally allowed for such a measure constituted a “procedural and substantive deficienc[y]” that breached NAFTA Article 1105.⁴⁷⁴

⁴⁶⁷ See *supra* ¶ 152.

⁴⁶⁸ *Metalclad v. Mexico* (Award), ¶ 91 (CL-0019-ENG) (noting that the claimant was not given notice of a meeting of the municipal town council where a permit was denied and that “the denial of the municipal construction permit, coupled with the procedural and substantive deficiencies of the denial” supported the tribunal's finding that Mexico's conduct breached NAFTA Article 1105).

⁴⁶⁹ *Glencore v. Colombia* (Award), ¶¶ 1446, 1449, 1450 (CL-0057-ENG) (finding that a measure is arbitrary where it is based on “whim,” “discretion,” “personal preference” or is “random” instead of legal standards and reason); *Metalclad v. Mexico* (Award), ¶¶ 86, 92, 106 (CL-0019-ENG).

⁴⁷⁰ *TECO Guatemala Holdings, LLC v. Republic of Guatemala*, ICSID Case No. ARB/10/23, Award, ¶ 587 (19 December 2013) (Mourre (P), von Wobeser, Park) (CL-0058-ENG).

⁴⁷¹ Expert Report-[REDACTED]-Environmental-Claimant's Memorial-SPA ¶¶ 169, 174.

⁴⁷² *Id.*, ¶ 174 *et seq.*

⁴⁷³ *Id.*

⁴⁷⁴ *Metalclad v. Mexico* (Award), ¶¶ 86, 92-93, 97 (CL-0019-ENG) (finding that the denial in granting the permit could only have been based on reasons related to physical construction defects and concluding that these were not alleged).

214. Other irregular aspects of the shutdown of CALICA's operations in El Corchalito confirm that it was contrary to due process. For example, the administrative inspection proceeding that led to this draconian measure was plagued with irregularities and conducted in violation of Mexican law. Under Mexican law, administrative acts deriving from an invalid administrative act are invalid.⁴⁷⁵ Yet, PROFEPA conducted a "supplemental inspection" of CALICA's lots to purportedly correct a concededly flawed and invalid initial inspection.⁴⁷⁶ This supplemental inspection — which was invalid *ab initio* and contrary to due process — formed the purported basis for the Shutdown Order.⁴⁷⁷

215. As these facts demonstrate, in shutting down CALICA's operations in El Corchalito (a measure that also extended to La Adelita and thus further precluded quarrying activities there), Mexico failed to afford CALICA due process in violation of NAFTA Article 1105.

(3) Mexico Did Not Act in Good Faith or Proportionally

216. NAFTA Article 1105 also requires Mexico to act in good faith. NAFTA tribunals have recognized that good faith is a "basic obligation of the State under Article 1105(1)."⁴⁷⁸ To comply with this obligation, Mexico must "not manifestly violate the requirements of consistency, transparency, even-handedness and non-discrimination."⁴⁷⁹ Good faith also requires the host State to abstain from using "legal instruments for purposes other than those for which they were

⁴⁷⁵ Expert Report- [REDACTED]-Environmental-Claimant's Memorial-SPA ¶¶ 152-153.

⁴⁷⁶ *Id.*, ¶ 150.

⁴⁷⁷ See *supra* ¶ 144. Additional irregularities are detailed in the expert report of [REDACTED]. See Expert Report- [REDACTED]-Environmental-Claimant's Memorial-SPA Parts VII.B.2 and 3. (explaining, for example, that PROFEPA's inspectors went beyond the scope of their "supplemental" inspection in violation of Mexican law and were not duly authorized to perform the inspection because their PROFEPA credentials were expired).

⁴⁷⁸ *Waste Management v. Mexico* (Award), ¶ 138 (CL-0007-ENG) ("A basic obligation of the State under Article 1105(1) is to act in good faith and form, and not deliberately to set out to destroy or frustrate the investment by improper means."); *S.D. Myers, Inc. v. Government of Canada*, UNCITRAL, Partial Award, ¶ 134 (13 November 2000) (Hunter (P), Chiasson, Schwartz) (CL-0059-ENG) (hereinafter, "*S.D. Myers v. Canada* (Award)") ("Article 1105 imports into the NAFTA the international law requirements of due process, economic rights, obligations of good faith and natural justice."); *Merrill & Ring v. Canada* (Award), ¶ 187 (CL-0005-ENG) ("Good faith and the prohibition of arbitrariness are no doubt an expression of such general principles and no tribunal today could be asked to ignore these basic obligations of international law.") (citations omitted).

⁴⁷⁹ *Saluka v. Czech Republic* (Award), ¶ 307 (CL-0027-ENG).

created.”⁴⁸⁰ Furthermore, measures that are disproportionate to the ends they pursue are unfair and inequitable.⁴⁸¹

217. A State’s repudiation of its contractual obligations may further indicate that the State is not acting in good faith in accordance with its obligation to accord fair and equitable treatment.⁴⁸² In *Sapphire International Petroleum Ltd. v. National Iranian Oil Company*, for instance, the tribunal held that the breach of a joint venture agreement by Iran’s national oil company was a violation of the “general principle [] of law, based upon reason and upon the common practice of civilized countries,” to act in “good faith and good will.”⁴⁸³ The tribunal went

⁴⁸⁰ *Frontier v. Czech Republic* (Award), ¶ 300 (CL-0056-ENG); see also *Abengoa v. Mexico* (Award), ¶ 642 (CL-0047-SPA); *Tecmed v. Mexico* (Award), ¶¶ 153-154 (CL-0052-ENG) (“The investor also expects the State to use the legal instruments that govern the actions of the investor or the investment in conformity with the function usually assigned to such instruments.”).

⁴⁸¹ *Occidental Petroleum Corporation and Occidental Exploration and Production Company et al. v. Republic of Ecuador*, ICSID Case No. ARB/06/11, Award, ¶¶ 404-409, 427 (5 October 2012) (Yves Fortier (P), Stern, Williams) (CL-0060-ENG) (concluding that fair and equitable treatment includes an obligation of proportionality); *RREEF Infrastructure et al. v. Kingdom of Spain*, ICSID Case No. ARB/13/30, Decision on Responsibility and on the Principles of Quantum, ¶¶ 260, 324 (30 November 2018) (Pellet (P), Nikken, Volterra) (CL-0061-ENG) (considering proportionality as a central factor in evaluating the State’s exercise of legislative power against the fair -and -equitable -treatment standard); *MTD Equity Sdn. Bhd. & MTD Chile S.A. v. Republic of Chile*, ICSID Case No. ARB/01/7, Award, ¶ 109 (25 May 2004) (Rigo Sureda (P), Oreamuno Blanco, Lalonde) (CL-0062-ENG) (hereinafter, “*MTD v. Chile* (Award)”) (citing Judge Schwebel asserting that “‘fair and equitable treatment’ is ‘a broad and widely-accepted standard encompassing such fundamental standards as good faith, due process, nondiscrimination, and proportionality’”); Schreuer, *Fair and Equitable Treatment*, p. 373 (CL-0063-ENG).

⁴⁸² BIN CHENG, GENERAL PRINCIPLES OF LAW AS APPLIED BY INTERNATIONAL COURTS AND TRIBUNALS, p. 113 (Cambridge University Press, 1953) (CL-0063-ENG) (“*Pacta sunt servanda*, now an indisputable rule of international law, is but an expression of the principle of good faith which above all signifies the keeping of faith, the pledged faith of nations as well as that of individuals.”) (citation omitted); see also Jason Webb Yackee, *Pacta Sunt Servanda and State Promises to Foreign Investors Before Bilateral Investment Treaties: Myth and Reality*, 32(5) Fordham ILJ 1550, p. 1583 (2008) (CL-0064-ENG) (recognizing that the *pacta sunt servanda* principle applies to contracts between states and individuals); JESWALD SALACUSE, THE THREE LAWS OF INTERNATIONAL INVESTMENT: NATIONAL, CONTRACTUAL, AND INTERNATIONAL FRAMEWORKS FOR FOREIGN CAPITAL, p. 319 (Oxford University Press, 2013) (CL-0065-ENG) (“Various tribunals have confirmed that the principle of *pacta sunt servanda* underlies contracts entered into by states and foreign investors.”); Ole Spiermann, *Applicable Law*, in THE OXFORD HANDBOOK OF INTERNATIONAL INVESTMENT LAW, 89, p. 98 (P. Muchlinski, F. Ortino, C. Schreuer eds., 2008) (CL-0066-ENG) (“The principle *pacta sunt servanda* forms the bedrock of key principles associated with the international law for the protection of aliens.”); Tudor, *The FET Standard*, p. 199 (CL-0036-ENG) (“it is generally accepted that the breach of contractual obligations [with an investor] amounts to a violation of the well-established principle of *pacta sunt servanda*.”).

⁴⁸³ *Sapphire International Petroleum Ltd. v. National Iranian Oil Company*, Award, pp. 172-173 (15 March 1963) (Cavin) (CL-0067-ENG) (hereinafter, “*Sapphire v. NIOC* (Award)”; see also *Libyan American Oil Company (LIAMCO) v. Government of the Libyan Arab Republic*, Award, p. 103 (12 April 1977) (Mahmassani) (CL-0068-ENG) (“The principle of the respect for agreements is thus applicable to ordinary contracts and concession agreements. It is binding on individuals as well as governments”); *Amco Asia Corporation and others v. Republic of Indonesia*, ICSID Case No. ARB/81/1, Award, ¶ 14.i (20

on to explain that “it is a fundamental principle of law, which is constantly being proclaimed by international courts, that contractual undertakings must be respected. The rule *pacta sunt servanda* is the basis of every contractual relationship.”⁴⁸⁴

218. There is ample evidence in the record that Mexico failed to act in good faith when it blocked quarrying operations in El Corchalito and La Adelita. *First*, Mexico failed to act in good faith when, after agreeing in writing to amend the POEL and later confirming that obligation in the Amended MOU, it nonetheless repudiated that obligation for political expediency.⁴⁸⁵ Furthermore, Mexico’s repudiation of its obligation to amend the POEL was contrary to good faith because it lacked transparency, as Mexico provided no technical or legal justifications for its failure to perform.⁴⁸⁶

219. *Second*, PROFEPA’s contention that the alleged excess extraction resulted in an undefined “risk of damage to natural resources” because SEMARNAT purportedly had not evaluated the environmental impact of such alleged excess extraction is contrary to good faith.⁴⁸⁷ PROFEPA alleges that CALICA extracted a total of 142.15 hectares, 2.15 hectares over the extraction limit of 140 hectares permitted in the 20-year term of the Corchalito/Adelita Federal Environmental Authorization.⁴⁸⁸ But “SEMARNAT assessed the environmental impact of the Project over 42 years” with the assumption that 294 hectares would be extracted (140 hectares in the first 20-year term and another 154 hectares in a second 22-year term).⁴⁸⁹ “SEMARNAT — as it usually does with these kinds of projects — granted CALICA the Corchalito/Adelita Federal

November 1984) (Goldman (P), Rubin, Foighel) (CL-0069-ENG) (enforcing an agreement between the State and a private investor based on the principle of *pacta sunt servanda*).

⁴⁸⁴ *Sapphire v. NIOC* (Award), p. 181 (CL-0067-ENG).

⁴⁸⁵ See, e.g., *Abengoa v. Mexico* (Award), ¶¶ 644-645, 650-652 (CL-0047-SPA) (noting that Mexico failed to act in good faith when it closed the investor’s facility for political reasons rather than legitimate environmental and public health considerations); *Tecmed v. Mexico* (Award), ¶¶ 154, 164 (CL-0052-ENG) (noting that the closure of a facility for political reasons, without regard to whether it was being properly operated, was contrary to good faith); Dolzer, *FET Contours*, p. 17 (CL-0050-ENG) (“One obvious application of the notion of good faith is the duty to act for cause, and not for purely arbitrary reasons of domestic politics.”).

⁴⁸⁶ See *supra* ¶216, n.479 (citing *Saluka v. Czech Republic*). See also *Emilio Agustin Maffezini v. Kingdom of Spain*, ICSID Case No. ARB/97/7, Award, ¶ 83 (13 November 2000) (Orrego Vicuña (P), Buergenthal, Wolf) (CL-0105-ENG); *Tecmed v. Mexico*, Award, ¶ 172 (CL-0052-ENG).

⁴⁸⁷ See *supra* ¶ 150.

⁴⁸⁸ Shutdown Order, p. 280 (22 January 2018) (C-0117-SPA).

⁴⁸⁹ Expert Report [REDACTED] -Claimant’s Memorial-SPA ¶ 248.

Environmental Authorization for 20 years with the right of extension through a simple renewal process” without requiring a new environmental impact assessment.⁴⁹⁰ Accordingly, SEMARNAT’s assessment had already covered an extraction volume (294 hectares) that was far greater than the amount that PROFEPA alleges was extracted by CALICA (142.15 hectares).

220. *Third*, as these facts make clear, PROFEPA’s Shutdown Order was disproportionate. Having determined that CALICA “probably” exceeded its extraction limits by approximately 1% based on “approximated” measurements,⁴⁹¹ PROFEPA stopped CALICA’s operations in El Corchalito and further barred operations in La Adelita indefinitely, rather than allowing CALICA to show that no such excess had in fact occurred (as is its right).⁴⁹² It is also disproportionate for PROFEPA to have delayed resolution of the case for over three years while placing CALICA in a situation of procedural limbo.⁴⁹³

221. *Fourth*, Mexico did not act in good faith when API Quintana Roo threatened CALICA to shut down its operations if it did not stop seeking reimbursement for the millions of dollars that the agency had unlawfully collected from CALICA for over a decade, and when — in retaliation — PROFEPA made good on that threat five days later.⁴⁹⁴

222. *Fifth*, PROFEPA failed to act in good faith by placing CALICA in a Catch-22 situation. PROFEPA determined that the only way to lift the Shutdown Order and close its administrative proceeding is for CALICA to admit that it exceeded the extraction limit and seek an amendment of the Corchalito/Adelita Federal Environmental Authorization, even though there is no factual basis for such an admission and the Authorization cannot be amended while the administrative proceeding remains open.⁴⁹⁵ Following the shutdown, PROFEPA aggravated

⁴⁹⁰ *Id.*, ¶¶ 230, 250; Corchalito/Adelita Federal Environmental Authorization, p. 13 (30 November 2000) (C-0017-SPA); Environmental Impact Statement (C-000), Chapter II, pp. 28, 54 (noting that the Project has an estimated life of 42 years).

⁴⁹¹ *See supra* ¶¶ 147, 150.

⁴⁹² *See MTD v. Chile*, ¶ 109 (CL-0062-ENG) (citing Judge Schwebel for the proposition that “‘fair and equitable treatment’ is ‘a broad and widely-accepted standard encompassing [...] proportionality.’”).

⁴⁹³ *See supra* ¶¶ 157, 159.

⁴⁹⁴ *See supra* ¶¶ 133-135; *see also Tokios Tokelès v. Ukraine*, ICSID Case No. ARB/02/18, Dissenting Opinion of Daniel Price, ¶ 2 (26 July 2007) (Mustill (P), Price, Bernardini) (CL-0070-ENG) (agreeing with the majority that there is no serious debate that the fair and equitable treatment obligation is breached where a State exercises its sovereign powers to retaliate against an investor for political purposes).

⁴⁹⁵ *See supra* ¶ 157.

the dispute by filing a criminal complaint against CALICA based on CALICA's alleged quarrying of 2.15 hectares without the required authorization. As of the date of this filing, this criminal proceeding is pending.⁴⁹⁶

* * *

223. For all of these reasons, in effectively precluding CALICA from quarrying La Adelita and El Corchalito, Mexico failed to accord fair and equitable treatment to Legacy Vulcan and its investments in violation of NAFTA Article 1105.

(4) Mexico's Disregard of Final Judicial Determinations Is Contrary to the Rule of Law

224. A State's failure to comply with a final judgment of its domestic courts may amount to a violation of the fair and equitable treatment standard.⁴⁹⁷ Multiple tribunals have found that the subversion of "the rule of law" constitutes arbitrary conduct,⁴⁹⁸ and compliance with court decisions is a cornerstone of the rule of law. There can be no rule of law if a government is free to disregard the final decisions of its courts.⁴⁹⁹ Recognizing this principle, the tribunal in *Siag v. Egypt* held that the Egyptian government's refusal to comply with a series of judicial rulings in the claimants' favor was an "extraordinary violation of the rule of law" and, thus, a violation of the fair and equitable treatment standard.⁵⁰⁰

⁴⁹⁶ See *supra* ¶ 158. The abuse of the State's investigatory or prosecutorial powers has been deemed to breach the fair and equitable treatment standard. See, e.g., *Pope & Talbot v. Canada* (Damages), ¶ 68 (CL-0031-ENG) (considering the illegitimate "suggestions of criminal investigation of the Investment's conduct" to breach NAFTA Article 1105); *Swisslion DOO Skopje v. Former Yugoslav Republic of Macedonia*, ICSID Case No. ARB/09/16, Award, ¶ 276 (6 July 2012) (Guillaume (P), Price, Thomas) (CL-0071-ENG).

⁴⁹⁷ UNCTAD, Fair and Equitable Treatment, p. 80 (CL-0043-ENG).

⁴⁹⁸ See *Joseph Charles Lemire v. Ukraine*, ICSID Case No. ARB/06/18, Decision on Jurisdiction and Liability, ¶ 263 (14 January 2010) (Fernández-Armesto (P), Paulsson, Voss) (CL-0072-ENG) ("Summing up, the underlying notion of arbitrariness is that prejudice, preference or bias is substituted for the rule of law"); *Glencore v. Colombia* (Award), ¶ 1450 (CL-0057-ENG); *OI European v. Venezuela* (Award), ¶ 491 (CL-0049-ENG) ("A State [violates the FET standard] when it takes an action or a chain of actions that are demonstrably unlawful or fail to recognize the basic requirements of the rule of law.") (citation omitted).

⁴⁹⁹ Elizabeth Andersen & Ted Piccone, *The Meaning, Measuring, and Mattering of the Rule of Law*, 67(4) DOJ J. Fed. L. & Prac 103, pp. 105, 109-110 (2019) (CL-0073-ENG) (stating that government accountability is a universal principle of the rule of law and that the ability of the judiciary to limit the executive is used to measure a State's compliance with the rule of law).

⁵⁰⁰ *Siag v. Egypt* (Award), ¶¶ 453-454 (CL-0048-ENG).

225. Here, Mexican government entities have blatantly ignored the final ruling of Mexico's own judiciary in favor of CALICA. Through the SCT, Mexico forced CALICA to surrender the benefits of its port concession by illegally granting API Quintana Roo the right to collect port fees for CALICA's use of its own private terminal. CALICA challenged this measure in 2007, but it took CALICA ten years of litigation to obtain a final judgment. On 25 January 2017, Mexico's Supreme Court affirmed a lower court ruling confirming that the SCT's measure was illegal and void.⁵⁰¹ API Quintana Roo disregarded this ruling, continued collecting the illegal fees for almost a year thereafter, and failed to reimburse CALICA the [REDACTED] unlawfully collected from 2007 through 2017.⁵⁰²

226. API Quintana Roo's open disregard of the final ruling of Mexico's judiciary is a glaring violation of the rule of law and constitutes arbitrary conduct in violation of the fair and equitable treatment standard.

b) Mexico Frustrated Legacy Vulcan's and CALICA's Legitimate Expectations to Quarry La Adelita

227. As noted above, NAFTA Article 1105 protects Legacy Vulcan's and CALICA's legitimate expectations arising from Mexico's representations. As the tribunal in *Thunderbird v. Mexico* recognized, the minimum standard of treatment is breached "where a Contracting Party's conduct creates reasonable and justifiable expectations on the part of an investor (or investment) to act in reliance on said conduct, such that a failure by the NAFTA Party to honour those expectations could cause the investor (or investment) to suffer damages."⁵⁰³ Similarly, in *Grand River v. United States*, the tribunal stated that "[o]rdinarily, reasonable or legitimate expectations of the kind protected by NAFTA are those that arise through targeted representations or

⁵⁰¹ See *supra* ¶ 132.

⁵⁰² See *supra* ¶ 137.

⁵⁰³ *Thunderbird v. Mexico* (Award), ¶¶ 147, 195-196 (CL-0004-ENG); see also *Waste Management v. Mexico* (Award), ¶ 98 (CL-0007-ENG) (recognizing that the minimum standard of treatment calls for a consideration of "representations made by the host State which were reasonably relied on by the claimant."); *Bilcon v. Canada* (Award), ¶¶ 455, 603 (CL-0009-ENG) (holding that the host state breached Article 1105 when its conduct was contrary to the reasonable expectations of the investor).

assurances made explicitly or implicitly by a state party.”⁵⁰⁴ Commentators have endorsed these views, acknowledging that NAFTA Article 1105 protects investors’ legitimate expectations.⁵⁰⁵

228. NAFTA tribunals have held Mexico in breach of NAFTA Article 1105 for frustrating a foreign investor’s legitimate expectations. The tribunal in *Metalclad v. Mexico*, for example, concluded that Mexico failed to accord fair and equitable treatment in part because the investor legitimately relied on representations by federal officials that certain permits were forthcoming, only for those permits to be denied improperly thereafter.⁵⁰⁶

229. The facts here present a clear breach of an investor’s legitimate expectations. Mexico’s conduct and specific representations spanning many years — including in detailed contractual commitments enshrined in the 2014 Agreements — led Legacy Vulcan reasonably to expect that CALICA would be able to quarry La Adelita, causing millions to be invested in anticipation of expanded operations there. Mexico ultimately changed course and repudiated its earlier representations and commitments, thus frustrating Legacy Vulcan’s and CALICA’s legitimate expectations and causing them damages.

(1) Legacy Vulcan and CALICA Reasonably Relied on Mexico’s Assurances that CALICA Would Be Able to Quarry La Adelita

230. For decades, Mexico gave assurances and engaged in conduct indicating that CALICA would be able to conduct quarrying operations in La Adelita. As far back as in 1986,

⁵⁰⁴ *Grand River v. United States*, ¶ 141 (CL-0018-ENG); see also Christoph Schreuer & Ursula Kriebaum, *At What Time Must Legitimate Expectations Exist*, in *A LIBER AMICORUM: THOMAS WÄLDE – LAW BEYOND CONVENTIONAL THOUGHT* 1, p. 10 (J. Werner & A. H. Ali eds., 2009) (CL-0074-ENG) (“the decisive element for the protection of legitimate expectations of foreign investors is reliance on general or specific assurances given by the host State at the relevant time.”).

⁵⁰⁵ Florian Dupuy & Pierre-Marie Dupuy, *What to Expect from Legitimate Expectations? A Critical Appraisal and Look Into the Future of the “Legitimate Expectations” Doctrine in International Investment Law*, in *FESTSCHRIFT AHMED SADEK EL-KOSHERI*, 273, p. 280 (M. Raouf, P. Leboulanger, N. Ziade eds., 2015) (CL-0075-ENG) (favoring the inclusion of legitimate expectations as a stand-alone element of FET under NAFTA Article 1105); Stephen Fietta, *The Legitimate Expectations Principle under Article 1105 NAFTA - International Thunderbird Gaming Corporation v. United Mexican States*, 7(3) JWTA 423, p. 432 (2006) (CL-0076-ENG) (concluding that legitimate expectations should be considered a self-standing category for a claim under NAFTA Article 1105).

⁵⁰⁶ *Metalclad v. Mexico* (Award), ¶¶ 89, 99 (CL-0019-ENG).

Mexico recognized in the Investment Agreement that the Project, which originally envisioned quarrying La Rosita, could be expanded to include other lots.⁵⁰⁷

231. Consistent with this representation, Legacy Vulcan acquired El Corchalito and La Adelita in 1996. In purchasing these lots, Legacy Vulcan also relied on the State of Quintana Roo's confirmation that quarrying operations were feasible there under applicable zoning regulations.⁵⁰⁸ In fact, the State's confirmation was essential for the purchase of El Corchalito and La Adelita, as is explicitly set out in the lots' title deeds.⁵⁰⁹ While making additional investments in the Project, Legacy Vulcan further relied on the Municipality of Solidaridad's confirmation that "it had no objection" to CALICA's quarrying activities in La Adelita and El Corchalito.⁵¹⁰

232. These representations were coupled with actions by Mexican authorities reaffirming that quarrying La Adelita was permitted. In 1996, for example, the State of Quintana Roo granted CALICA the Corchalito/Adelita State Environmental Authorization, which has been renewed several times and is currently valid through 2036 and can be further extended.⁵¹¹ This authorization allows CALICA to quarry La Adelita and El Corchalito above the water table.⁵¹² Similarly, in 2000, SEMARNAT granted CALICA the Corchalito/Adelita Federal Environmental

⁵⁰⁷ *See supra*, ¶ 27.

⁵⁰⁸ *See supra*, ¶ 73.

⁵⁰⁹ La Adelita Title Deed, Seventh Whereas (21 June 1996) (C-0035-SPA) ("The seller exhibits [...] the land use feasibility certificate for activities related to the extractive industry and those associated for the lot that is the subject of this deed according to Letter No. SIMAP/791/996") (free translation, the original text reads: "El vendedor exhibe [...] el oficio de factibilidad del uso del suelo en actividades relacionadas con la industria extractiva y conexas para el predio motivo de esta escritura según el oficio número SIMAP/791/996"); El Corchalito Title Deed, Ninth Whereas (21 June 1996) (C-0034-SPA) ("the selling company exhibits [...] the land use feasibility certificate for activities related to the extractive industry and those associated for the lot referenced herein, issued by the [SIMAP]") (free translation, the original text reads: "La Sociedad Vendedora exhibe [...] el Oficio de Factibilidad para el Uso del Suelo para la realización de actividades relacionadas con la industria extractiva y conexas para el predio de referencia, expedido por la [SIMAP]").

⁵¹⁰ *See supra*, ¶ 74.

⁵¹¹ *See supra*, ¶ 75.

⁵¹² *Id.*

Authorization.⁵¹³ Valid through 2020 but renewable for an additional 22 years, this authorization allows CALICA to quarry La Adelita and El Corchalito below the water table.⁵¹⁴

233. In 2007, the Municipality of Solidaridad granted CALICA a Land Use License to quarry La Adelita and El Corchalito — which is still valid — confirming that CALICA was allowed to “extract petrous material” in those lots.⁵¹⁵ And after the POEL was enacted in 2009, the High Court of Justice of the State of Quintana Roo confirmed that the POEL does not affect CALICA’s permits to quarry La Adelita and El Corchalito or their renewal.⁵¹⁶ The State of Quintana Roo and the Municipality of Solidaridad echoed the court’s conclusion by repeatedly representing that the POEL did not affect CALICA’s vested rights to quarry La Adelita and El Corchalito.⁵¹⁷ For instance, on 19 May 2011, the State of Quintana Roo renewed the Corchalito/Adelita State Environmental Authorization expressly acknowledging that those lots were subject to the previous zoning regime.

“[T]he lots called El Corchalito [and] La Adelita [...] are regulated by Environmental Management Units nineteen and thirty (UGA 19 and 30) of the [POET] [...] and, therefore [...] the exploitation of petrous materials in these lots is feasible according to the policy of exploitation and predominant use for mining [established by] UGA 19, as well as to the determination to allow mining on a conditional basis by UGA 30.”⁵¹⁸

234. These assurances were firmly reinforced in the 2014 Agreements. In them, Mexico and its instrumentalities pledged to amend the POEL in a way that would enable CALICA to secure the necessary vegetation-removal permit in La Adelita (the CUSTF) and thus allow it to exercise its vested rights to quarry there.⁵¹⁹ Relying on Mexico’s pledge and the steps that Mexico took to

⁵¹³ See *supra*, ¶ 76.

⁵¹⁴ *Id.* This renewal would be achieved through a simple process, given that SEMARNAT evaluated the impact of the Project for a total of 42 years. Expert Report- [REDACTED]-Environmental-Claimant’s Memorial-SPA, ¶ 78.

⁵¹⁵ See *supra*, ¶ 79.

⁵¹⁶ See *supra*, ¶ 83.

⁵¹⁷ See *supra*, ¶¶ 82-83.

⁵¹⁸ Second Amendment to the Corchalito/Adelita State Environmental Authorization, p. 4 (19 May 2011) (C-0075-SPA) (the original text reads: “... los predios denominados El Corchalito, [y] La Adelita [...] se encuentran regulados por las Unidades de Gestión Ambiental diecinueve y treinta (UGA 19 y 30) del [POET] [...] por lo que se determina que el aprovechamiento de los materiales pétreos en dichos predios es factible de acuerdo a la política de Aprovechamiento y uso predominante para la minería de la (UGA 19), así como al uso condicionado para la Minería de la (UGA 30)”).

⁵¹⁹ See *supra*, ¶ 94, 98-99.

amend the POEL, Legacy Vulcan committed additional investments in the Project worth approximately [REDACTED] between June 2014 and December 2017, including but not limited to the construction of a supplemental processing plant and a new explosives storage facility, and the acquisition of heavy machinery and two Panamax vessels specially designed to meet the Project's specifications.⁵²⁰ Legacy Vulcan would not have made these long-term investments had Mexico not firmly committed to amend the POEL to enable quarrying operations to begin in La Adelita.⁵²¹

235. All of these targeted and explicit assurances and obligations — expressed and assumed in the span of over 25 years — created reasonable and justifiable expectations in Legacy Vulcan and CALICA that CALICA would be allowed to quarry its largest untapped lot (La Adelita) beginning in 2016.⁵²²

(2) Mexico Failed to Amend the POEL and Caused Damages to Legacy Vulcan and CALICA

236. Mexico's repeated assurances and representations turned out to be hollow. Although Mexican authorities started the formal process to amend the POEL [REDACTED], this process was halted suddenly and without any justification.⁵²³ Mexican authorities later repudiated their obligations [REDACTED].⁵²⁴ The POEL was never amended [REDACTED], and CALICA is unable to quarry La Adelita.⁵²⁵

⁵²⁰ See *supra* ¶¶ 105-108; see also Memorandum for Meeting of the Board of Directors, pp. 1-2 (11 July 2014) (C-0088-ENG) (noting that "Calica has been in discussions with federal, state and local officials in Mexico for several years regarding [...] Resolution of zoning limitations on certain portions of the Calica reserves." and that the MOU provides "Zoning of all Calica properties for the extraction of limestone."); Authorization for Expenditure (AFE) Project Description, Plant 4511, Sac Tun, Supplemental Plant, p. 5 (24 April 2015) (C-0089-ENG); Witness Statement-[REDACTED]-Claimant's Memorial-ENG, ¶¶ 52-54.

⁵²¹ See *supra* ¶ 109.

⁵²² Witness Statement-[REDACTED]-Claimant's Memorial-ENG, ¶¶ 57, 60.

⁵²³ See *supra* ¶¶ 114-120.

⁵²⁴ See *supra* ¶¶ 121-131.

⁵²⁵ *Id.*

237. By repudiating its obligation [REDACTED] and further reneging on its multiple additional assurances regarding CALICA's ability to quarry La Adelita, Mexico has caused significant losses to Legacy Vulcan and CALICA, as detailed in Part VI.C.1 below.⁵²⁶

C. MEXICO FAILED TO OBSERVE THE OBLIGATIONS IT UNDERTOOK IN THE 2014 AGREEMENTS

238. As explained in Part V.A above, NAFTA Article 1103 requires Mexico to accord Legacy Vulcan and CALICA treatment no less favorable than that Mexico accords to investors and investments under other investment treaties.⁵²⁷ Accordingly, to the extent that other post-NAFTA investment agreements to which Mexico is a party afford more protection and, thus, better treatment than that provided in NAFTA, Legacy Vulcan and CALICA are entitled to benefit from that more comprehensive protection.

239. Mexico affords Swiss investors and their investments more favorable treatment under the Mexico-Switzerland BIT than that afforded to U.S. and Canadian investors under NAFTA. Pursuant to Article 10(2) of the Mexico-Switzerland BIT, Mexico guarantees to "observe any other obligation it has assumed with regard to investments in its territory by investors of [Switzerland]."⁵²⁸ NAFTA contains no such guarantee.

240. Under NAFTA Article 1103, Legacy Vulcan is entitled to receive at least the same treatment that Mexico affords to Swiss investors under Article 10(2) of the Mexico-Switzerland BIT.⁵²⁹ Not affording Legacy Vulcan's investments the more comprehensive level of protection

⁵²⁶ The amendment of the POEL is a sovereign act, as it could only be carried out through the legislative authority of the Municipality of Solidaridad and the participation of the State of Quintana Roo. So is the failure to exercise that power when legally required to do so. In failing to comply with its obligation to amend the POEL for political reasons, the Municipality was acting *iure imperii*. See Guido Santiago Tawil, *The Distinction Between Contract Claims and Treaty Claims: An Overview*, in INTERNATIONAL ARBITRATION 2006: BACK TO BASICS? 492, p. 525 (A. J. van den Berg ed., 2007) (CL-0077-ENG) (hereinafter, "Tawil, *Contract Claims*") ("If the State adopted the measures in its sovereign capacity, the breach could not be equated, in principle, to an ordinary non-compliance of contract and, therefore, absent exculpatory circumstances, one could easily conclude that the State has committed a violation of the fair and equitable treatment standard by acting against the investor's legitimate expectations."). Tribunals have also equated active State measures with omissions for the purposes of breaching investors' legitimate expectations. *Eureko v. Poland* (Award), ¶¶ 226-235 (CL-0046-ENG); UNCTAD, Fair and Equitable Treatment, p. 63 (CL-0043-ENG) ("Essentially, any action or omission attributable to the host State can become a subject of an FET claim.").

⁵²⁷ See *supra* ¶ 194.

⁵²⁸ Agreement between the Swiss Confederation and the United Mexican States on the Promotion and Reciprocal Protection of Investments, signed 10 July 1995, entered into force 14 March 1996 (C-0138-ENG).

⁵²⁹ *Id.* (C-0138-ENG)

that Mexico grants to Swiss investors would result in Legacy Vulcan receiving treatment less favorable than that accorded by Mexico to Swiss investors. While Swiss investors would enjoy the substantive protection against Mexico's breach of "other obligations" (such as those assumed in the 2014 Agreements), U.S. investors would not.

241. As noted above, in NAFTA Annex IV, Mexico recognized that (i) Article 1103 applies when the more favorable treatment is granted through treaties that postdate NAFTA, and (ii) "treatment" for purposes of Article 1103 encompasses substantive protections afforded in those treaties.⁵³⁰ The Mexico-Switzerland BIT entered into force in 1996, two years after NAFTA, affording Swiss investors the right under Article 10(2) of that BIT to elevate contractual claims to treaty claims. Legacy Vulcan and its investments are entitled to enjoy the same right pursuant to NAFTA Article 1103.⁵³¹

242. International tribunals have confirmed that umbrella clauses, such as Article 10(2) of the Mexico-Switzerland BIT, may be applied through MFN provisions. In *EDF v. Argentina*, the tribunal concluded that the MFN clause in the relevant treaty permitted recourse to the umbrella clause of third-country BITs, noting that "[t]o interpret the BIT otherwise would effectively read the MFN language out of the treaty. Such a result cannot be what the countries intended by the treaty language."⁵³² Similarly, the tribunal in *Arif v. Moldova* held that the MFN clause in that case could be used to invoke the umbrella clause from BITs entered into with third countries, "thereby extending the more favourable standard of protection granted by the 'umbrella' clause [...] into the BIT at hand."⁵³³

243. The 2014 Agreements contain obligations undertaken by Mexico with regard to investments in its territory by Legacy Vulcan within the scope of the imported umbrella clause in

⁵³⁰ See *supra* ¶ 195; NAFTA, Annex IV - Schedule of Mexico: Exceptions from Most-Favored-Nation Treatment (Chapter 11) (C-0133-ENG) ("Mexico takes an exception to Article 1103 for treatment accorded under all bilateral or multilateral international agreements in force or signed prior to the date of entry into force of this Agreement. *For international agreements in force or signed after the date of entry into force of this Agreement, Mexico takes an exception to Article 1103 for treatment accorded under those agreements involving: (a) aviation; (b) fisheries; (c) maritime matters, including salvage; or (d) telecommunications.*" (emphasis added).

⁵³¹ See *supra* ¶¶ 195-196.

⁵³² *EDF International S.A. et al. v. Argentine Republic*, ICSID Case No. ARB/03/23, Award, ¶ 933 (11 June 2012) (Park (P), Kaufmann-Kohler, Remón) (CL-0078-ENG).

⁵³³ *Mr. Franck Charles Arif v. Republic of Moldova*, ICSID Case No. ARB/11/23, Award, ¶ 396 (8 April 2013) (Cremades (P), Hanotiau, Knieper) (CL-0079-ENG) (hereinafter, "*Arif v. Moldova* (Award)").

Article 10(2) of the Mexico-Switzerland BIT. The SCT, the State of Quintana Roo, API Quintana Roo, and the Municipality of Solidaridad entered into the 2014 Agreements in their sovereign capacity. Under the 2014 Agreements, Mexico and its instrumentalities agreed, *inter alia*, to amend the POEL, modify the API Quintana Roo Concession, assist with the calculation of CALICA's port concession fees, and reduce the cadastral values applicable to El Corchalito and La Adelita.⁵³⁴

244. As explained in Part II.H.1 above, Mexico repudiated the 2014 Agreements by failing to amend the POEL by 5 December 2015 so that CALICA could quarry La Adelita. Consequently, CALICA will not be able to produce and commercialize aggregates from that lot.⁵³⁵

245. Mexico's repudiation of the 2014 Agreements constitutes a breach of the umbrella clause in Article 10(2) of the Mexico-Switzerland BIT, which is applicable here by giving effect to NAFTA Article 1103. This breach forms a separate and independent basis for Mexico's liability in this proceeding, entitling Legacy Vulcan to compensation for losses incurred from its inability to quarry La Adelita.

VI. COMPENSATION

246. In accordance with well-settled principles of international law, Legacy Vulcan is entitled to full reparation for the losses caused by Mexico's violations of NAFTA. This reparation would entail returning Legacy Vulcan to the position it would have been in had Mexico complied with its obligations. Full reparation here requires monetary compensation sufficient to wipe out the consequences of Mexico's wrongful acts.⁵³⁶

247. Legacy Vulcan's claim for damages is explained and quantified in the expert report of Darrell Chodorow of the Brattle Group (the "Brattle Report"), an expert with extensive experience in the valuation and quantification of damages, including in relation to mining and quarrying properties. Based on the Brattle Report, Legacy Vulcan estimates the damages caused

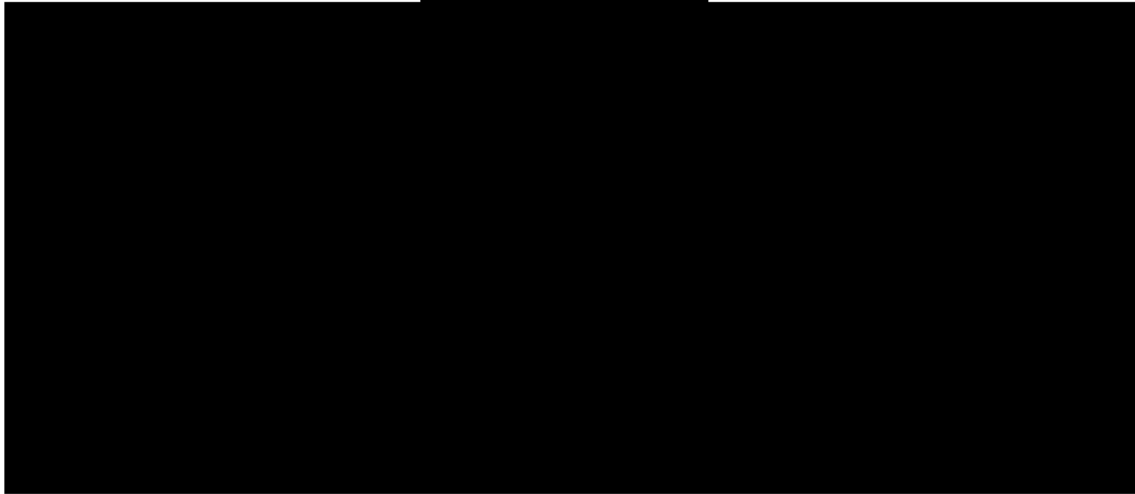
⁵³⁴ See *supra* ¶ 95; Tawil, *Contract Claims*, p. 525 (CL-0077-ENG) ("If the State adopted the measures in its sovereign capacity, the breach could not be equated, in principle, to an ordinary non-compliance of contract and, therefore, absent exculpatory circumstances, one could easily conclude that the State has committed a violation of the fair and equitable treatment standard by acting against the investor's legitimate expectations.").

⁵³⁵ See *supra* ¶ 113.

⁵³⁶ See *infra* ¶¶ 259-254.

by Mexico's wrongful measures at [REDACTED], including interest, as of 30 April 2020, and adjustments to avoid double taxation, as summarized in the table below:

Table 1: [REDACTED]



248. The compensation to which Legacy Vulcan is entitled in this case is detailed below in a discussion of: (A) the applicable standard of compensation; (B) the applicable methodology; (C) the *quantum* of compensation owed by Mexico; (D) pre-award and post-award interest; (E) adjustments to prevent double taxation; and (D) costs and expenses.

A. LEGACY VULCAN IS ENTITLED TO FULL REPARATION

249. Under NAFTA Article 1135, “[w]here a Tribunal makes a final award against a Party, the Tribunal may award, separately or in combination, only: (a) monetary damages and any applicable interest [or] (b) restitution of property, in which case the award shall provide that the disputing Party may pay monetary damages and any applicable interest in lieu of restitution.”⁵³⁷

250. Because restitution is not possible here, Legacy Vulcan is entitled to monetary compensation. NAFTA does not prescribe how these monetary damages are to be calculated. The Tribunal should therefore calculate Legacy Vulcan’s damages in accordance with customary international law.⁵³⁸

⁵³⁷ NAFTA, Article 1135 (C-0009-ENG).

⁵³⁸ See NAFTA, Article 1131 (C-0009-ENG) (providing that the tribunal “shall decide the issues in dispute in accordance with [NAFTA] and applicable rules of international law”); see *supra* Part V.A (discussing applicable law).

251. The governing customary international law standard of full reparation is articulated in the *Chorzów Factory* case.⁵³⁹ Under this standard, Mexico must provide Legacy Vulcan with “[f]ull reparation” for the harm resulting from Mexico’s breaches. This “reparation must, as far as possible, wipe out all the consequences of the illegal act and re-establish the situation which would, in all probability, have existed if that act had not been committed.”⁵⁴⁰

252. This standard is codified in the International Law Commission’s Articles on Responsibility of States for Internationally Wrongful Acts.⁵⁴¹ They provide that “[t]he responsible State is under an obligation to make full reparation for the injury caused by the internationally wrongful act” and that such “compensation shall cover any financially assessable damage including loss of profits insofar as it is established.”⁵⁴² The NAFTA tribunal in *ADM v. Mexico* interpreted this language to mean that “compensation encompasses both the loss suffered (*damnum emergens*) and the loss of profits (*lucrum cessans*).”⁵⁴³

253. *Chorzów* is widely recognized as the prevailing standard of compensation for breaches of investment treaty obligations other than expropriation.⁵⁴⁴ For example, the NAFTA tribunal in *SD Myers v. Canada* held that “[t]he principle of international law stated in the

⁵³⁹ *Chorzów Factory* (Judgment), p. 47 (CL-0080-ENG); see also *ADC Affiliate Limited & ADMC Management Limited v. Republic of Hungary*, ICSID Case No. ARB/03/16, Award, ¶ 484 (2 October 2006) (Kaplan (P), Brower, van den Berg) (CL-0081-ENG) (hereinafter, “*ADC Affiliate v. Hungary* (Award)”) (“The customary international law standard for the assessment of damages resulting from an unlawful act is set out in the decision of the PCIJ in the *Chorzów Factory* case[.]”); *S.D. Myers v. Canada* (Award), ¶ 311 (CL-0059-ENG) (“The principle of international law stated in the *Chorzów Factory* (*Indemnity*) case is still recognised as authoritative on the matter of general principle.”).

⁵⁴⁰ *Chorzów Factory* (Judgment), p. 47 (CL-0080-ENG).

⁵⁴¹ See ILC Draft Articles, Articles 31, 36 (C-0139-ENG).

⁵⁴² *Id.*

⁵⁴³ *Archer Daniels Midland Company and Tate & Lyle Ingredients Americas, Inc. v. United Mexican States*, ICSID Case No. ARB (AF)/04/5, Award, ¶ 281 (21 November 2007) (Cremades (P), Siqueiros, Rovine) (CL-0082-ENG).

⁵⁴⁴ See, e.g., *BG Group Plc. v. Republic of Argentina*, UNCITRAL, Award, ¶¶ 426, 427, 429 (24 December 2007) (Aguilar-Álvarez (P), van den Berg, Garro) (C-0106-ENG) (applying the *Chorzów* standard in a breach of fair and equitable treatment case); *Valores Mundiales v. Venezuela* (Award), ¶¶ 692-693 (CL-0023-ENG) (concluding that the *Chorzów* rule of full reparation applies to compensate for violations of the fair and equitable treatment standard); *ADC Affiliate v. Hungary* (Award), ¶ 493 (CL-0081-ENG) (“there can be no doubt about the present vitality of the *Chorzów Factory* principle, its full current vigor having been repeatedly attested to by the International Court of Justice.”); *AMOCO International Finance Corporation v. Government of the Islamic Republic of Iran, National Iranian Oil Company and others*, IUSCT Case No. 56, Partial Award, ¶ 191 (14 July 1987) (Virally (P), Brower, Anzari Moin) (CL-0083-ENG); *Murphy v. Ecuador* (Award), ¶¶ 424-425 (CL-0026-ENG) (“The Tribunal is satisfied that the above principle of full reparation applies to breaches of investment treaties unrelated to expropriations.”).

Chorzow Factory (Indemnity) case is still recognised as authoritative on the matter of general principle [of damages].”⁵⁴⁵ As the tribunal in *Greentech v. Italy* explained:

“[A]bsent an applicable treaty provision on damages, the Chorzów Factory ‘full compensation’ standard is the appropriate starting point for quantum assessment. The Tribunal finds that this general standard applies to FET, umbrella clause, and other treaty violations, and is therefore not limited to cases of expropriation.”⁵⁴⁶

254. The purpose of an award of damages is the same irrespective of the nature of the host State’s breach of international obligations: to wipe out the consequences of the State’s wrongful acts and to compensate the claimant so as to place it in the same position it would have been in had the State not violated the treaty.⁵⁴⁷ Accordingly, any monetary award in this case must put Legacy Vulcan in the same economic position it would have been in had Mexico not breached NAFTA.⁵⁴⁸

B. METHODOLOGY

255. Mexico’s wrongful measures affected the profitability and longevity of the Project

⁵⁴⁵ *S.D. Myers v. Canada* (Award), ¶ 311 (CL-0059-ENG).

⁵⁴⁶ *Greentech Energy Systems A/S, et al. v. Italian Republic*, SCC Case No. V 2015/095, Final Award, ¶ 548 (23 December 2018) (Park (P), Sacerdoti, Haigh) (CL-0084-ENG); see also *Joseph Charles Lemire v. Ukraine*, ICSID Case No. ARB/06/18, Award, ¶ 149 (28 March 2011) (Fernández-Armesto (P), Paulsson, Voss) (CL-0085-ENG) (applying *Chorzów* to a breach of the fair and equitable treatment standard even where such breach “does not lead to a total loss of the investment”); *Gold Reserve Inc. v. Bolivarian Republic of Venezuela*, ICSID Case No. ARB(AF)/09/1, Award, ¶ 678 (22 September 2014) (Bernardini (P), Dupuy, Williams) (CL-0086-ENG) (hereinafter “*Gold Reserve v. Venezuela* (Award)”) (“the principles espoused in the *Chorzów Factory* case, even if initially established in a State-to-State context, are the relevant principles of international law to apply when considering compensation for breach of a BIT.”); *Valores Mundiales v. Venezuela* (Award), ¶¶ 692-694 (CL-0023-ENG).

⁵⁴⁷ *Compañía de Aguas del Aconquija S.A. and Vivendi Universal S.A. v. Argentine Republic*, ICSID Case No. ARB/97/3, Award, ¶ 8.2.7 (20 August 2007) (Rowley (P), Bernal Vereza, Kaufmann-Kohler) (hereinafter, “*Vivendi v. Argentina* (Award)”) (CL-0087-ENG) (“regardless of the type of investment, and regardless of the nature of the illegitimate measure, the level of damages awarded in international investment arbitration is supposed to be sufficient to compensate the affected party fully and to eliminate the consequences of the state’s action.”).

⁵⁴⁸ *Chorzów Factory* (Judgment), p. 47 (CL-0080-ENG); *Petrobart Limited v. Kyrgyz Republic*, SCC Case No. 126/2006, Award, pp. 78-79 (29 March 2005) (Danelius (P), Smets, Bring) (CL-0088-ENG) (“[the investor] shall so far as possible be placed financially in the position in which it would have found itself, had the breaches not occurred.”).

██████████⁵⁴⁹ Accordingly, those measures — which have materialized into lost future profits for Legacy Vulcan — have had a negative impact in the fair market value (“FMV”) of Legacy Vulcan.⁵⁵⁰ While determining the negative impact in Legacy Vulcan’s FMV would be a proper method for calculating damages, Mr. Chodorow focused his analysis on the FMV of the Legacy Vulcan assets that are exclusively devoted to its Mexican operations.⁵⁵¹ He therefore determined the reduction in FMV of the “CALICA Network,”⁵⁵² that is, Legacy Vulcan’s integrated quarrying operations in Quintana Roo, its shipping business established to transport aggregates derived from those operations, and its distribution yards ██████████

██████████.⁵⁵³

256. The FMV of an asset or group of assets is defined as:

“the price, expressed in terms of cash equivalents, at which property would change hands between a hypothetical willing and able buyer and a hypothetical willing and able seller, acting at arm’s length in an open and unrestricted market, when neither is under compulsion to buy or sell and when both have reasonable knowledge of the relevant facts.”⁵⁵⁴

257. The method for determining the FMV of an asset depends on that asset’s characteristics.⁵⁵⁵ Where the asset is a “going concern,” the assessment of its FMV must take future profitability into consideration to provide full compensation.⁵⁵⁶

⁵⁴⁹ Expert Report-Darrell Chodorow-Damages-Claimant’s Memorial-ENG, ¶ 83.

⁵⁵⁰ *Id.*, ¶¶ 70, 77.

⁵⁵¹ *Id.*, ¶ 72 (explaining that Legacy Vulcan has many assets unrelated to its Mexican operations).

⁵⁵² *Id.*, ¶¶ 2, 21, 72.

⁵⁵³ *Id.*, ¶ 2. *See supra* ¶¶ 39-50.

⁵⁵⁴ Expert Report-Darrell Chodorow-Damages-Claimant’s Memorial-ENG, ¶ 69.

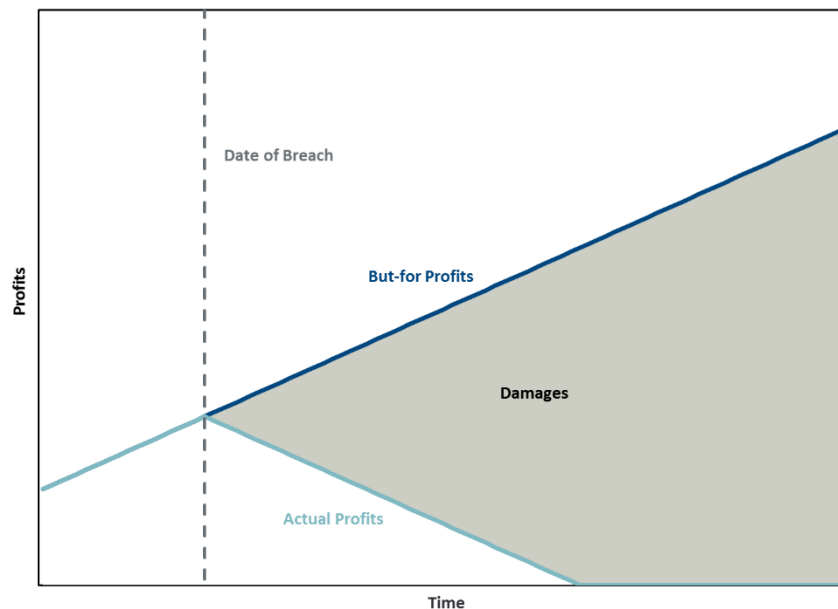
⁵⁵⁵ *See Crystallex International Corporation v. Bolivarian Republic of Venezuela*, ICSID Case No. ARB(AF)/11/2, Award, ¶ 886 (4 April 2016) (Lévy (P), Boisson de Chazournes, Gotanda) (CL-0089-ENG) (“Tribunals may consider any techniques or methods of valuation that are generally acceptable in the financial community, and whether a particular method is appropriate to utilize is based on the circumstances of each individual case. A tribunal will thus select the appropriate method basing its decision on the circumstances of each individual case.”).

⁵⁵⁶ *Phillips Petroleum Company Iran v. Islamic Republic of Iran and the National Iranian Oil Company*, IUSCT Case No. 39, Award, ¶ 111 (29 June 1989) (Briner (P), Khalil Khalilian, Aldrich) (CL-0090-ENG).

258. The CALICA Network is a going concern with established markets and customer relationships and decades of reliably profitable operations.⁵⁵⁷ Although Respondent's wrongful measures have not destroyed the full value of the CALICA Network, they have had a material adverse effect because [REDACTED].⁵⁵⁸ Damages to Legacy Vulcan therefore materialize as the expected loss of profits due to the impact of Mexico's breaches on the value of the CALICA Network and thus the value of Legacy Vulcan.⁵⁵⁹

259. Figure 4 below illustrates the methodology for calculating damages from lost profits, which reflect the difference between the but-for profits (those without the breach) and actual profits (those with the breach). The lost profits from Mexico's breaches of NAFTA reduced the expected cash flows of the CALICA Network and therefore diminished its FMV. As the owner of the CALICA Network, Legacy Vulcan experienced a loss in its FMV due to the diminution in the value of the CALICA Network.

Figure 4: Illustrative Damages Approach



⁵⁵⁷ Expert Report-Darrell Chodorow-Damages-Claimant's Memorial-ENG, ¶ 74.

⁵⁵⁸ *Id.*, ¶¶ 70, 75.

⁵⁵⁹ *Id.*, ¶ 70. As the Permanent Court of International Justice noted in *Chorzów*, "future prospects," "probable profit," and "future financial results" are factors material to the valuation of a going concern. *Chorzów Factory* (Judgment), pp. 50-51 (CL-0080-ENG).

260. The Discounted Cash Flow (“DCF”) approach is the most appropriate method to quantify the value of a going concern such as the CALICA Network absent Mexico’s wrongful measures.⁵⁶⁰ Favored in international law and finance,⁵⁶¹ the DCF method values an asset according to the expected future cash flows that it can generate for its owner and then discounts those cash flows back to the valuation date at a rate that takes into account the timing and the risk of those cash flows to determine the net present value of that asset.⁵⁶²

261. In accordance with the full reparation principle, Mr. Chodorow calculated the FMV of the CALICA Network by projecting expected future cash flows (i) assuming that the wrongful measures were not in place (the “But-For Scenario”) and (ii) with the wrongful measures in place (the “Actual Scenario”). The difference between these scenarios provides the measure of damages arising from Mexico’s wrongful conduct.⁵⁶³ As Mr. Chodorow explains, Legacy Vulcan’s damages reflect the reduction in the FMV of the CALICA Network as a consequence of Mexico’s wrongful measures, after accounting for steps that Legacy Vulcan could take to mitigate its losses.⁵⁶⁴

C. QUANTUM OF DAMAGES

262. Mexico’s main wrongful measures — *i.e.*, its failure to amend the POEL by 5 December 2015 as promised in the 2014 Agreements (“Breach No. 1”) and its shutdown of CALICA’s operations in El Corchalito (“Breach No. 2”) — materialized on 6 December 2015 and 24 January 2018, respectively. Because full reparation requires that Legacy Vulcan be placed in the same economic position it would have been in but for the breach, Mr. Chodorow calculated the damages accruing from each of these wrongful measures as of the date on which each breach

⁵⁶⁰ Expert Report-Darrell Chodorow-Damages-Claimant’s Memorial-ENG, ¶¶ 22, 71.

⁵⁶¹ See, *e.g.*, *Gold Reserve v. Venezuela* (Award), ¶ 831 (CL-0086-ENG).

⁵⁶² Expert Report-Darrell Chodorow-Damages-Claimant’s Memorial-ENG, ¶ 82 *et seq.*

⁵⁶³ IRMGARD MARBOE, *CALCULATION OF COMPENSATION AND DAMAGES IN INTERNATIONAL INVESTMENT LAW*, § 3.331 (Oxford University Press, 2017) (CL-0091-ENG) (“The only measure of damages is the comparison of the financial situations with and without the breach.”).

⁵⁶⁴ Expert Report-Darrell Chodorow-Damages-Claimant’s Memorial-ENG, ¶¶ 70-72.

materialized.⁵⁶⁵ Mr. Chodorow assumes that Legacy Vulcan will not be able to quarry La Adelita and El Corchalito or to use these lots for other commercial purposes in the future.⁵⁶⁶

263. Because the FMV of the CALICA Network was diminished by each of Breach No. 1 and Breach No. 2 on different dates, Mr. Chodorow calculated the loss to Legacy Vulcan separately for each breach. His calculation of damages arising out of the repudiation of the 2014 Agreements (Breach No. 1) reflects the reduction in FMV as of 6 December 2015 resulting from CALICA's inability to quarry La Adelita starting in early 2016, but with continued operations in La Rosita and El Corchalito. Mr. Chodorow's calculation of damages resulting from the unlawful shutdown of operations in El Corchalito (Breach No. 2) assumes that CALICA's operations are limited only to La Rosita going forward because, as of 24 January 2018, La Adelita could not be quarried as a result of Breach No. 1. Because each breach eliminated the ability to quarry different lots, the damages from Breach No. 1 and Breach No. 2 are additive, as shown in the figure below.⁵⁶⁷



⁵⁶⁵ *Id.*, ¶¶ 71, 77; see also *Valores Mundiales v. Venezuela* (Award), ¶ 747 (CL-0023-ENG) (adopting as the valuation date the day before the publication of the measure that the claimants alleged marked the culmination of the respondent's violation of the fair and equitable treatment standard); *Enron Corporation and Ponderosa Assets, L.P. v. Argentine Republic*, ICSID Case No. ARB/01/3, Award, ¶ 405 (22 May 2007) (Orrego Vicuña (P), van den Berg, Tschanz) (CL-0092-ENG) (valuing the business immediately prior to the enactment of the emergency law which caused the most serious damages to the claimant); *CMS v. Argentina* (Award), ¶ 441 (C-0024-ENG) (adopting as valuation date the day prior to the issuance of an injunction preventing adjustment of distribution tariffs using the U.S. Producer Price Index (PPI)).

⁵⁶⁶ Expert Report-Darrell Chodorow-Damages-Claimant's Memorial-ENG, ¶ 79.

⁵⁶⁷ *Id.*

1. Damages Arising Out of Mexico's Repudiation of the 2014 Agreements (Breach No. 1)

264. To calculate Legacy Vulcan's damages arising out of Mexico's repudiation of the 2014 Agreements, Mr. Chodorow used the DCF method to calculate the FMV of the CALICA Network without the repudiation (But-For Scenario) and with it (Actual Scenario).

265. In the But-For Scenario, Mexico's instrumentalities would have complied with the Amended MOU by publishing an amended POEL by 5 December 2015, enabling CALICA to quarry La Adelita.⁵⁶⁸ For this scenario, Mr. Chodorow calculated the FMV of the CALICA Network assuming compliance with that obligation as of 6 December 2015. He therefore assumed that CALICA would have been able to (i) commence operations in La Adelita in early 2016 and (ii) quarry all of its lots (*i.e.*, La Rosita, El Corchalito, and La Adelita) until their reserves were depleted.⁵⁶⁹

266. After projecting the expected future net cash flows of the CALICA Network under this scenario, Mr. Chodorow applied reductions to those cash flows to account for country risk. He also applied a discount rate to those cash flows to account for the time value of money and other risks, arriving at the net present value of the CALICA Network as of 6 December 2015. The resulting value of the CALICA Network in the But-For Scenario is [REDACTED].⁵⁷⁰

267. In the Actual Scenario, by contrast, CALICA has been prevented from quarrying La Adelita because Mexico failed to honor its obligation to amend the POEL. For this scenario, Mr. Chodorow projected the future net cash flows of the CALICA Network assuming that CALICA would have been able to quarry only in El Corchalito and La Rosita until depletion of its reserves in those lots.⁵⁷¹ He then reduced those cash flows to account for country risk and discounted them using the same discount rate used in the But-For Scenario to arrive at the net present value of the CALICA Network in the Actual Scenario.⁵⁷² This value is [REDACTED].⁵⁷³

⁵⁶⁸ See *supra* ¶¶ 111-131.

⁵⁶⁹ Expert Report-Darrell Chodorow-Damages-Claimant's Memorial-ENG, ¶ 94.

⁵⁷⁰ *Id.*, ¶ 168.

⁵⁷¹ *Id.*, ¶¶ 184-185.

⁵⁷² *Id.*, ¶ 192.

⁵⁷³ *Id.*, ¶168.

268. The difference between the values of the CALICA Network in the But-For and Actual Scenarios yields the measure of damages suffered by Legacy Vulcan as a result of Mexico's repudiation of the 2014 Agreements: [REDACTED].⁵⁷⁴ This figure was then reduced to account for steps that Legacy Vulcan could take to mitigate its damages, resulting in a damages figure of [REDACTED] for Breach No. 1.⁵⁷⁵ The sections below summarize those calculations, which the Brattle Report lays out in detail.⁵⁷⁶

a) But-For Value of the CALICA Network (Without Mexico's Repudiation of the 2014 Agreements)

269. To calculate the FMV of the CALICA Network in the But-For Scenario as of 6 December 2015, Mr. Chodorow *first* determined the production and sales volumes that the CALICA Network would have achieved absent Mexico's repudiation of the 2014 Agreements. *Second*, he calculated future revenues based on expected production levels and expected prices. *Third*, he calculated net cash flows by subtracting from these revenues the expected operating costs, capital expenditures, and other costs associated with the CALICA Network. *Fourth*, he applied an additional adjustment to the projected cash flows to account for country risk. *Last*, Mr. Chodorow determined the net present value of these cash flows using an appropriate discount rate. Each element is discussed next.

(1) Forecast Production and Sales Volumes

270. To forecast CALICA's sales in the But-For Scenario, Mr. Chodorow relied on CALICA's long-term forecast of projected export and local sales, which was prepared by Legacy Vulcan in the normal course of business in March 2015.⁵⁷⁷ In 2015, Legacy Vulcan estimated that these sales would average [REDACTED] per year over a [REDACTED].⁵⁷⁸ Legacy Vulcan formulated a quarrying plan to meet this demand, indicating, for example, which sites would be quarried and to what degree, what equipment would be necessary, and what volumes would come from above- or below-water extraction.⁵⁷⁹

⁵⁷⁴ *Id.*

⁵⁷⁵ *Id.*

⁵⁷⁶ *Id.*, Part IV.C.1.

⁵⁷⁷ *Id.*, ¶ 88.

⁵⁷⁸ *Id.*, ¶ 90.

⁵⁷⁹ The quarrying plans used in the Brattle Report were developed in accordance with the standard approach that Legacy Vulcan employs to develop quarrying plans in the normal course of business. These plans

271. Under this quarrying plan, which drives several other elements in Mr. Chodorow's projections, [REDACTED]

[REDACTED], as explained below.⁵⁸¹

(2) Forecast CALICA Network Revenue

272. To project CALICA's revenues in the But-For Scenario, Mr. Chodorow relied on price forecasts for the CALICA Network's local and export sales and on forecasts of volumes sold in the export (almost exclusively U.S.) and local markets.⁵⁸²

273. To project the sales price of CALICA's aggregates in U.S. markets, Mr. Chodorow reviewed the historical price of crushed stone (limestone) and historical price trends for CALICA aggregates in the export market.⁵⁸³ [REDACTED]

incorporated the objective of achieving production matching CALICA's expected long-term sales forecast. Each quarrying plan provides forecasted production schedules by year and site, broken down by above-water and below-water production, to supply the expected CALICA demand for both the But-For and Actual Scenarios for as many years as possible. Expert Report-Darrell Chodorow-Damages-Claimant's Memorial-ENG, ¶ 88-89; Witness Declaration-[REDACTED]-Claimant's Memorial-ENG, ¶¶ 64-66.

⁵⁸⁰ Expert Report-Darrell Chodorow-Damages-Claimant's Memorial-ENG, ¶ 94.

⁵⁸¹ *Id.*

⁵⁸² *Id.*, ¶ 98.

⁵⁸³ *Id.*, ¶¶ 98, 100, 103.

⁵⁸⁴ *Id.*, ¶ 99.

⁵⁸⁵ Witness Declaration-[REDACTED]-Claimant's Memorial-ENG, ¶ 48.

⁵⁸⁶ *Id.*, ¶¶ 9, 44.

274. Mr. Chodorow similarly estimated the price of the small share of CALICA products sold locally in Mexico. In the 2005-2017 period, the local average sales price in U.S. dollar-terms [REDACTED] compared to a [REDACTED] inflation rate. Based on these historical figures, Mr. Chodorow concluded that future prices for product sold in Mexico will change by [REDACTED] U.S. inflation.⁵⁸⁸

275. [REDACTED] [REDACTED]

[REDACTED] [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] [REDACTED]

[REDACTED] [REDACTED]

[REDACTED] [REDACTED]

[REDACTED] [REDACTED]

[REDACTED]

⁵⁸⁷ *Id.*, ¶ 48; Expert Report-Darrell Chodorow-Damages-Claimant's Memorial-ENG, ¶ 102.

⁵⁸⁸ *Id.*, ¶ 105.

⁵⁸⁹ *Id.*, ¶¶ 98, 106.

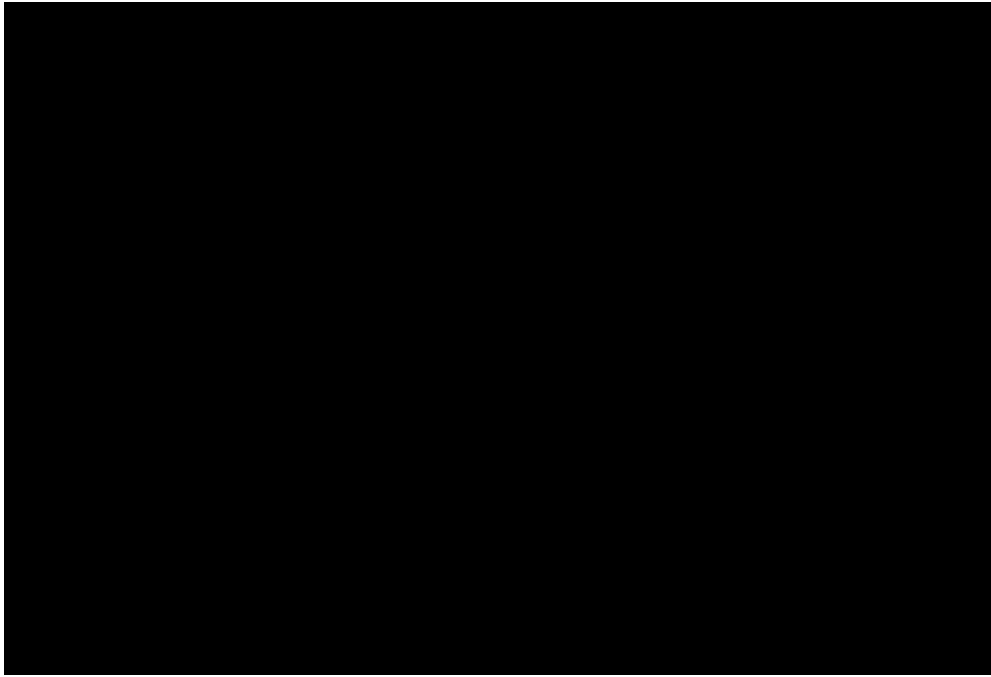
⁵⁹⁰ *Id.*, ¶ 98.

⁵⁹¹ *Id.*, ¶ 99.


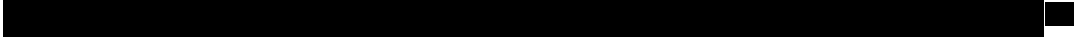
⁵⁹² *See supra* ¶ 53; Witness Declaration-[REDACTED]-Claimant's Memorial-ENG, ¶ 11.

⁵⁹³ *Id.*, ¶¶ 11, 45.

⁵⁹⁴ *Id.*, ¶ 45.

Figure 6: **(3) Forecast CALICA Network Costs**

276. Having estimated production volumes and sales, as well as the revenues that would be derived from them, Mr. Chodorow went on to forecast the costs of producing those volumes and generating those revenues (*i.e.*, operating costs).⁵⁹⁵ These operating costs fall into four categories: (i) Production Costs; (ii) Marine Transport Costs; (iii) Yard Costs; and (iv) Overhead Costs.⁵⁹⁶

277. Production Costs are those incurred at CALICA's lots to extract, process, stockpile, and load the aggregates onto trucks or ships, as well as the management and oversight of the CALICA quarry and marine terminal operations. Mr. Chodorow assessed fixed production costs (*e.g.*, inspection, environmental, supervision, health, and safety costs) and variable production costs (*e.g.*, drilling, blasting, processing, and stockpiling costs). He then isolated the fixed production costs for 2015 based on Legacy Vulcan's financial records, and projected them into the future. 


⁵⁹⁵ Expert Report-Darrell Chodorow-Damages-Claimant's Memorial-ENG, Part IV.A.3.

⁵⁹⁶ *Id.*, ¶ 107.

⁵⁹⁷ *Id.*, ¶ 116.

278. To project future variable production costs, Mr. Chodorow first calculated the cost of producing one ton of aggregates above and below the water table. [REDACTED]

279. Marine Transportation Costs include the costs of shipping aggregates from the Punta Venado terminal to the U.S. Yards [REDACTED]

280. Yard Costs are the costs associated with leasing and running the U.S. Yards and unloading aggregates there, as well as equipment, labor, and office expenses, and the costs associated with unloading aggregates at customer yards. [REDACTED]

⁵⁹⁸ *Id.*, ¶ 113.

⁵⁹⁹ *Id.*, ¶ 116.

⁶⁰⁰ [REDACTED] *Id.*, ¶ 121.

⁶⁰¹ To project the price of port fees, Mr. Chodorow took CALICA's historic payments, after removing the fees that API Quintana Roo illegally charged, and estimated that they will increase with inflation. Fuel prices are expected to increase with the price of crude oil as estimated by the U.S. Energy Information Administration. *Id.*, ¶¶ 118-119.

⁶⁰² *Id.*, ¶¶ 122-123.

281. Overhead Costs comprise general production overhead and selling, general, and administrative expenses for the CALICA Network. These costs were derived from CALICA's and Vulica's 2015 income statements and were projected to grow at the U.S. inflation rate.⁶⁰⁴

(4) Forecast Capital Expenditures ("Capex")

282. Capex refers to the investments in physical assets to build or maintain productive capacity. Mr. Chodorow projected the capex that would be necessary to meet the forecasted demand for CALICA aggregates in the But-For Scenario.⁶⁰⁵ He did so in three steps.

283. *First*, Mr. Chodorow identified the number of draglines and drills necessary in the But-For Scenario for below-water extraction and blasting, respectively. In doing so, he relied on Legacy Vulcan's quarrying plan, which identifies the number of draglines required per year per lot based on their capacity and the number of drills required based on quarrying schedules.⁶⁰⁶

284. *Second*, Mr. Chodorow calculated operating capex, that is, the investments needed to sustain operations, in the But-For Scenario based on historical company data developed in the ordinary course of business.⁶⁰⁸

⁶⁰³ In line with experience, variable yard costs are expected to increase 2.7% above inflation. *Id.*, ¶ 125.

⁶⁰⁴ *Id.*, ¶ 126.

⁶⁰⁵ *Id.*, ¶ 127 *et seq.*

⁶⁰⁶ *Id.*, ¶¶ 128-130; *see also* Witness Declaration-[REDACTED]-Claimant's Memorial-ENG, ¶¶ 64-66.

⁶⁰⁷ Expert Report-Darrell Chodorow-Damages-Claimant's Memorial-ENG, ¶ 129. In 2015, the cost of a dragline was [REDACTED], and the cost of a drill was [REDACTED]. The useful life of this equipment is approximately ten years. *See id.*, ¶ 130.

⁶⁰⁸ *Id.*, ¶¶ 131-132.

⁶⁰⁹ *Id.*, ¶ 131.

Mr. Chodorow adopted this figure in his estimations and assumed that average operating capex would increase at the annual rate of U.S. inflation.⁶¹¹

285. *Third*, Mr. Chodorow calculated vessel capex,

He also assessed the ships' maintenance and the upgrades necessary to comply with applicable regulations, such as taking the ships out of service for "dry-dock events" (i.e., regularly scheduled maintenance).⁶¹²

(5) Other Forecasts

286. To obtain the free cash flows of the CALICA Network, Mr. Chodorow also projected (i) depreciation, (ii) working capital, and (iii) income taxes. Relying on Legacy Vulcan's standard depreciation practice, he projected depreciation of most existing assets as of 2015 using a 10-year straight line convention, while the original cost of vessels were depreciated on a 20-year schedule and dry-dock capex was depreciated on a 5-year schedule.⁶¹³ [REDACTED]

Finally, Mr. Chodorow calculated the weighted-average income tax rate [REDACTED] for the entire CALICA Network based on the percentages used in 2015 to allocate income for tax purposes in Mexico (CALICA), the Bahamas (Vulica), and the United States (Legacy Vulcan's U.S. Yards).⁶¹⁵

⁶¹⁰ This does not include the cost of draglines and drills, which was calculated separately.

⁶¹¹ Expert Report-Darrell Chodorow-Damages-Claimant's Memorial-ENG, ¶ 132.

⁶¹² *Id.*, ¶¶ 133-135.

⁶¹³ While the two new vessels acquired for the CALICA Network were depreciated on a 20-year schedule, the older ships were depreciated according to the Vessel Authorization for Expenditure (“AFE”). Capital expenses for dry-dock maintenance were depreciated according to a 5-year linear schedule. Expert Report-Darrell Chodorow-Damages-Claimant’s Memorial-ENG, ¶¶ 137-139.

⁶¹⁴ *Id.*, ¶¶ 140-142.

⁶¹⁵ As of 2015, CALICA was taxed in Mexico at a corporate income tax rate of [REDACTED], Vulica was taxed in the Bahamas at a corporate income tax rate of [REDACTED], and Legacy Vulcan's yards were taxed in the United States at a corporate income tax rate of [REDACTED]. Expert Report-Darrell Chodorow-Damages-Claimant's Memorial-ENG, ¶¶ 143-144.

(6) Risk Adjustments to Cash Flows

287. Because the projected cash flows estimated above do not account for country risk, the time value of money and systematic risk, Mr. Chodorow applied (i) an additional reduction to the cash flows to account for the country risk associated with having part of the operations in Mexico, and (ii) a discount rate to calculate the net present value of the CALICA Network's cash flows.⁶¹⁶ Each is discussed below.

288. Country/Political Risk. The aggregates-production portion of the CALICA Network is exposed to country risk associated with operating in Mexico. Instead of accounting for country risk by using the ill-fitting methodology of adding a premium to the discount rate, Mr. Chodorow further adjusted the expected CALICA Network cash flows to reflect the reduction in value of those cash flows due to the political risks of operating in Mexico that are not protected by NAFTA.⁶¹⁷

289. As Mr. Chodorow explains, the common practice of adding the sovereign-risk spread (in this case, the risk premium paid by Mexico on its U.S. dollar-based sovereign debt) onto the discount rate to account for country risk overestimates the correct discount rate.⁶¹⁸ This is because sovereign spreads include compensation for risks that are irrelevant to valuing an asset like the CALICA Network or are already reflected in the discount rate.⁶¹⁹ Sovereign spreads reflect the interest rate premium that investors demand to compensate for, *inter alia*, the risk of

⁶¹⁶ *Id.*, Part IV.A.6.

⁶¹⁷ *Id.*, ¶¶ 148, 155, Appendix D. Political risk includes a variety of factors, such as asset seizures, indirect expropriation, unexpected taxes or royalties, the instability of relevant government policies, the strength of the legal system, and internal and external conflicts such as general strikes, terrorism, and war.

⁶¹⁸ *Id.*, ¶¶ 149-151, Appendix D ¶¶ 1-3.

⁶¹⁹ *Id.*

sovereign debt default.⁶²⁰ As Mr. Chodorow notes, the risk faced by investors in Mexico's sovereign bonds is not the same risk faced by a business operating in Mexico.⁶²¹

290. To avoid injecting irrelevant risks captured in the sovereign spread into his calculations, Mr. Chodorow accounted for political risk separately, by applying a reduction or "haircut" to the expected cash flows of the CALICA Network.⁶²² This methodology is well supported by leading practitioners and academics on corporate finance.⁶²³ To calculate the reduction to the expected cash flows of the CALICA Network, Mr. Chodorow followed the methodology proposed by Professor Geert Bekaert and his co-authors at the Columbia Business School.⁶²⁴ He did so in three steps.

291. *First*, Mr. Chodorow estimated the component of Mexico's sovereign spread that relates only to political risk, *i.e.*, the political-risk spread. Consistent with the methodology proposed by Professor Bekaert and his colleagues, political risk is measured using the political-risk rating developed by The PRS Group, a firm that quantifies political-risk forecasts and ratings, described in the International Country Risk Guide ("ICRG").⁶²⁵ The political-risk spread based on the ICRG's rating includes the risk of certain state measures that would be in breach of NAFTA, such as expropriation without compensation, the inability to repatriate profits, and corruption by government officials.⁶²⁶ Mr. Chodorow adjusted ICRG's political-risk rating to

⁶²⁰ Prof. Bekaert explains that sovereign bond spreads reflect: (i) international economic and financial risk, which prompts investors to insist on a premium for holding sovereign bonds; (ii) risks associated with local macroeconomic conditions, such as GDP growth and the ability of the country to finance its obligations; (iii) bond market liquidity, which can prompt investors to seek a substantial premium for holding relatively illiquid sovereign bonds; and (iv) political risk, which covers the possibility of adverse political intervention, the instability of relevant government policies, weaknesses in the legal system, and the possibility of internal and external conflicts such as general strikes, terrorism, and war. Geert Bekaert, Campbell R. Harvey, Christian T. Lundblad, & Stephan Siegel, *Political Risk and International Valuation*, 37(C) *Journal of Corporate Finance*, 1 (2016) (DC-0035) (hereinafter, "Bekaert, *Political Risk*").

⁶²¹ Expert Report-Darrell Chodorow-Damages-Claimant's Memorial-ENG, ¶ 149, Appendix D ¶¶ 1-3.

⁶²² *Id.*, ¶ 151, Appendix D ¶ 5.

⁶²³ RICHARD A. BREALEY, STEWART C. MYERS, & FRANKLIN ALLEN, *PRINCIPLES OF CORPORATE FINANCE*, pp. 696, 222 - 213 (McGraw-Hill/Irwin, 2011) (DC-0052) ("*Avoid fudge factors. Don't give in to the temptation to add fudge factors to the discount rate to offset things that could go wrong with the proposed investment. Adjust cash-flow forecasts first.*"); Bekaert, *Political Risk* (DC-0035).

⁶²⁴ Expert Report-Darrell Chodorow-Damages-Claimant's Memorial-ENG, ¶ 152, Appendix D ¶¶ 1-5; Bekaert, *Political Risk* (DC-0035).

⁶²⁵ Expert Report-Darrell Chodorow-Damages-Claimant's Memorial-ENG, ¶ 152, Appendix D ¶ 3.

⁶²⁶ *Id.*, ¶ 155.

exclude those risks.⁶²⁷ In addition, because Professor Bekaert conducted his analysis in December 2013, Mr. Chodorow assessed the evolution of Mexican political risk since then and through the December 2015 valuation date for Breach No. 1. Based on this analysis, Mr. Chodorow concludes that the political-risk spread for the CALICA Network as of December 2015 is 75.6 basis points (0.756%).⁶²⁸

292. *Second*, after determining the appropriate political-risk spread, Mr. Chodorow converted that spread into an equivalent political-risk haircut or reduction to the CALICA Network expected cash flows. This reduction reflects the probability that a political-risk event will cause the CALICA Network's cash flows to cease perpetually in any given year. Using the methodology proposed by Professor Bekaert and his colleagues, Mr. Chodorow estimates this probability to be 0.72% per year.

293. This approach is illustrated in the figure below, which assumes that, absent country risk, an asset will generate US\$100 in cash flow per year. The Bekaert *et al.* method applies a haircut adjustment for the risk of loss that accumulates over time. This haircut is applied to the cash flows each year over the Project's expected life.⁶²⁹ As illustrated in Figure 7, if a political-risk event occurs in any given year, the value of the CALICA Network becomes zero.⁶³⁰ If a political-risk event does not occur in the first year, the value of the cash flows adjusted for political risk is US\$99.28, that is, US\$100 multiplied by the probability that a political-risk event does not occur in the first year (99.28%), which implies a haircut of 0.72% to the hypothetical US\$100 cash flow. In the second year, there is likewise a 0.72% probability of a political-risk event and a 99.28% probability that no such event occurs. The expected cash flows, adjusted for

⁶²⁷ *Id.*, ¶¶ 155-156. See also *Gold Reserve v. Venezuela* (Award), ¶ 841 (CL-0086-ENG) ("it is not appropriate to increase the country risk premium to reflect the market's perception that a State might have a propensity to expropriate investments in breach of BIT obligations"); *Starrett Housing Corp. v. Islamic Republic of Iran*, IUSCT Case No. 24, Concurring Opinion of Judge Holtzmann, ¶ 83 (14 August 1987) (Lagergren (P), Holtzman, Ameli) (CL-0093-ENG) ("International law teaches that the value of expropriated property must be determined without regard to the effects of taking or threats of taking.") (citation omitted); *American International Group, Inc., American Life Insurance Company v. Islamic Republic of Iran*, IUSCT Case No. 2, Award, p. 212 (19 December 1983) (Nils Mangård (P), Ansari Moin, Mosk) (CL-0094-ENG) ("In ascertaining the going concern value of an enterprise at a previous point in time for purposes of establishing the appropriate quantum of compensation for nationalization, it is [...] necessary to exclude the effects of actions taken by the nationalizing State in relation to the enterprise which actions may have depressed its value.").

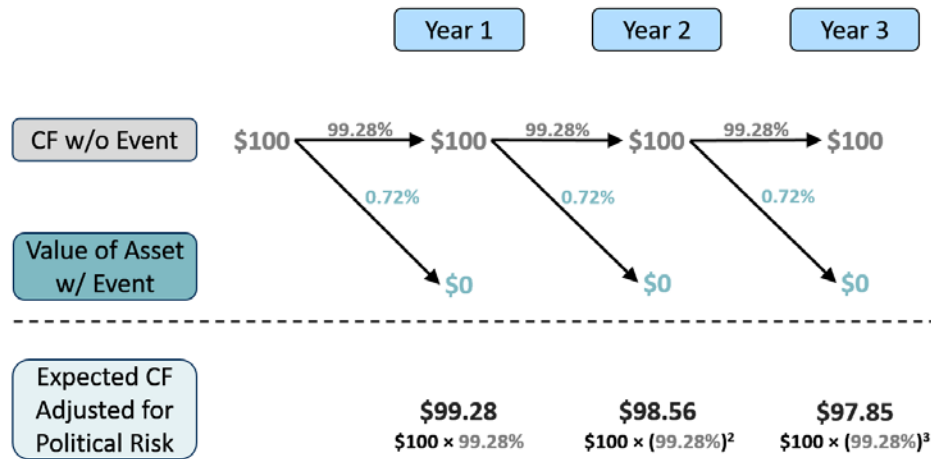
⁶²⁸ Expert Report-Darrell Chodorow-Damages-Claimant's Memorial-ENG, ¶ 156, Appendix D ¶ 6-9.

⁶²⁹ *Id.*, ¶ 157, Appendix D ¶ 13.

⁶³⁰ *Id.*

political risk, in the second year are US\$98.56, calculated as US\$100 multiplied by the probability that a political risk event did not occur in the first year (99.28%) and the second year (99.28%). This implies a haircut to the cash flows of approximately 1.43% in the second year.⁶³¹ These adjustments are cumulative and similarly applied to future years until the CALICA Network ceases operations.⁶³²

Figure 7 - Political Risk Haircut on CALICA Network Cash Flows



294. This methodology is the equivalent of adding a country risk premium of 0.78% to the discount rate.⁶³³

295. Discount Rate. As part of his DCF analysis, Mr. Chodorow discounted the expected future cash flows of the CALICA Network to account for the time value of money and systematic risk. Systematic risk, also known as market risk, refers to general, economy-wide risks that cannot be diversified away by investors. The adjustment to account for systematic risk is reflected in the discount rate that Mr. Chodorow used to determine the net present value of those future cash flows.⁶³⁴

296. The appropriate discount rate in this case is the opportunity cost of capital, known as the weighted average cost of capital or “WACC.” The WACC reflects the returns that equity and

⁶³¹ *Id.*, ¶ 158, Appendix D ¶ 14.

⁶³² *Id.*, ¶ 158, Appendix D ¶ 13.

⁶³³ *Id.*

⁶³⁴ Expert Report-Darrell Chodorow-Damages-Claimant’s Memorial-ENG, ¶ 145.

debt investors reasonably demand to invest on assets of similar risk.⁶³⁵ Mr. Chodorow used a WACC denominated in U.S. dollars to match the currency of the expected free cash flows.⁶³⁶ The WACC is the sum of two components (i) the cost of equity and (ii) the after-tax costs of debt, each weighted by its proportion in the total capital used to fund the CALICA Network.⁶³⁷ Based on his estimates of a set of U.S. publicly traded companies in the construction materials sector, Mr. Chodorow concluded that the after-tax WACC for the CALICA Network [REDACTED] [REDACTED].⁶³⁸

* * *

297. Based on the analysis summarized above, Mr. Chodorow concluded that the value of the CALICA Network on 6 December 2015 in the But-For Scenario — *i.e.*, assuming CALICA's ability to quarry La Adelita as of 2016 — is [REDACTED].⁶³⁹

b) The Market Approach Corroborates the Reasonableness of the Valuation of the CALICA Network in the But-For Scenario

298. To assess the reasonableness of the valuation of the CALICA Network in the But-For Scenario, Mr. Chodorow relied on the market approach, a valuation method that infers the value of an asset based on how the market values comparable assets.⁶⁴⁰ A standard metric used to value companies in the aggregates industry is the “EBITDA multiple,” which translates the value of an asset into a multiple of its earnings before interest, tax, depreciation, and amortization (“EBITDA”).⁶⁴¹ In this case, the market approach corroborates that the value of the CALICA Network in the But-For Scenario is consistent with market evidence.⁶⁴²

⁶³⁵ *Id.*, ¶¶ 146-147, Appendix C ¶ 5.

⁶³⁶ *Id.*, ¶ 146.

⁶³⁷ *Id.*, ¶ 146, Appendix C Parts II and III.

⁶³⁸ *Id.*, ¶ 147, Appendix C ¶ 11.

⁶³⁹ *Id.*, ¶ 182.

⁶⁴⁰ Expert Report-Darrell Chodorow-Damages-Claimant's Memorial-ENG, ¶¶ 75, 169. It is not possible to measure the loss caused by Mexico's breach through the market approach. This method is used only to corroborate the valuation of the CALICA Network in the But-For Scenario, as derived using the income method. *Id.*, ¶ 75.

⁶⁴¹ The EBITDA multiple is commonly used in the aggregates industry. *Id.*, ¶ 170.

⁶⁴² *Id.*, ¶ 171.

299. In search of suitable market comparators for his market approach analysis, Mr. Chodorow identified publicly-traded companies in the business of producing, distributing, and selling aggregates.⁶⁴³ Since there were no identifiable publicly-traded companies dedicated exclusively to aggregates (*i.e.*, “pure-plays” like the CALICA Network), Mr. Chodorow focused on companies that derive a material proportion of their revenue from aggregates, such as VMC (81%), Martin Marietta (57%), Summit Materials, Inc. (21%), and Eagle Materials Inc. (11%).⁶⁴⁴ VMC, the closest to a pure-play aggregates producer, had an EBITDA multiple of 19.4x in December 2015.⁶⁴⁵ In contrast, companies with relatively small aggregates segments had lower multiples.⁶⁴⁶

300. From these facts and other evidence, Mr. Chodorow concluded that multiples for pure-play aggregates companies are higher than for companies focused on asphalt and concrete, and other segments.⁶⁴⁷ For example, a November 2019 Nomura analyst report highlighted that VMC has consistently traded at a premium multiple compared to others in the segment because of its high-quality aggregates business.⁶⁴⁸ Similarly, in January 2019, Barclays stated that EBITDA multiples for aggregates businesses should be a minimum of 15x, but that multiples of 20x were reasonable.⁶⁴⁹

301. In addition, Mr. Chodorow analyzed corporate transactions from 2015 to 2019 in the aggregates and related sectors to determine the valuation these companies received.⁶⁵⁰ Again, these transactions showed that acquisition multiples for aggregates-focused businesses are significantly higher than those for transactions in other sectors not focused on aggregates (*e.g.*, asphalt, concrete, or a mix of assets).⁶⁵¹ The table below shows the EBITDA multiples from corporate acquisitions in aggregates-focused companies from 2015 to 2018. These had multiples

⁶⁴³ Expert Report-Darrell Chodorow-Damages-Claimant’s Memorial-ENG, ¶¶ 173-174.

⁶⁴⁴ *Id.*, ¶ 174.

⁶⁴⁵ While CALICA is an indirect subsidiary of VMC, this does not present an obstacle in inferring the value of the CALICA Network using VMC as part of the market approach method. *Id.*, n.240.

⁶⁴⁶ *Id.*, ¶ 174.

⁶⁴⁷ *Id.*, ¶ 176.

⁶⁴⁸ *Id.*, ¶ 177.

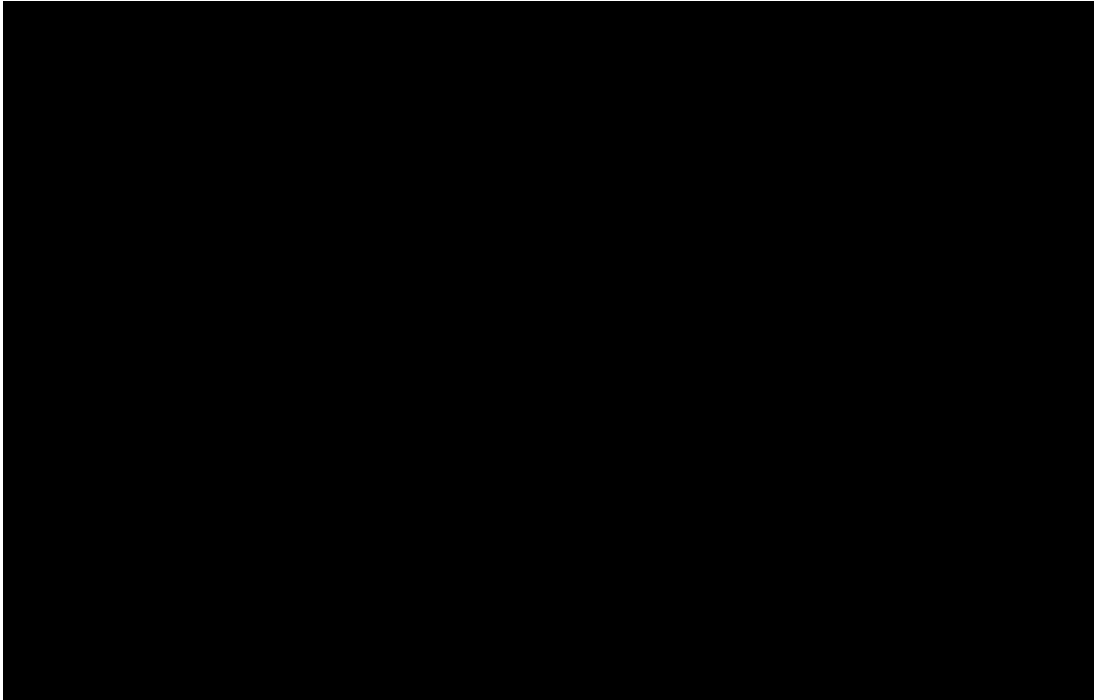
⁶⁴⁹ *Id.*

⁶⁵⁰ *Id.*, ¶ 178.

⁶⁵¹ *Id.*, ¶¶ 179-180.

of between 9.4x and 42.9x. This range translates into a median EBITDA multiple of 16x and an average of 15.9x.⁶⁵²

Table 3 - [REDACTED]



302. Based on the higher multiples associated with aggregates-focused businesses — reflected in EBITDA multiples of comparable publicly-traded companies and in corporate transactions — Mr. Chodorow concluded that an EBITDA multiple range of 15.0x to 19.0x is reasonable to value the CALICA Network but for the inability to quarry La Adelita (Breach No. 1). This multiple results in a valuation of approximately [REDACTED] for the CALICA Network. Since the DCF method yielded a value of [REDACTED] [REDACTED] for the CALICA Network in the But-For Scenario, the market approach corroborates the reasonableness of Mr. Chodorow's DCF analysis for that scenario.⁶⁵³

c) Actual Value of the CALICA Network (With Mexico's Repudiation of the 2014 Agreements)

303. Mr. Chodorow also calculated the FMV of the CALICA Network as of 6 December 2015 in the Actual Scenario — *i.e.*, without CALICA being able to quarry La Adelita at any time —

⁶⁵² These figures exclude clear outliers, one on the low and one on the high ends of the range. *Id.*, ¶ 180.

⁶⁵³ *Id.*, ¶ 182.

relying on the same DCF methodology described above. Each element of his analysis is summarized below.

(1) Forecast Production and Sales Volumes

304. Mr. Chodorow's calculation of production and sales volumes in the Actual Scenario traces the calculation of those variables in the But-For Scenario.⁶⁵⁴ He again relied on CALICA's long-term forecast of projected export and local sales and a quarrying plan, prepared by Legacy Vulcan in accordance with normal practices, to supply those sales assuming no ability to quarry La Adelita.⁶⁵⁵

305. While the projected market demand is the same in both the But-For and Actual scenarios, in the Actual Scenario, CALICA must meet that demand without the La Adelita reserves.⁶⁵⁶ [REDACTED]

[REDACTED]

306. [REDACTED]

[REDACTED]

⁶⁵⁴ See *supra* ¶ 270-275.

⁶⁵⁵ Expert Report-Darrell Chodorow-Damages-Claimant's Memorial-ENG, ¶ 92.

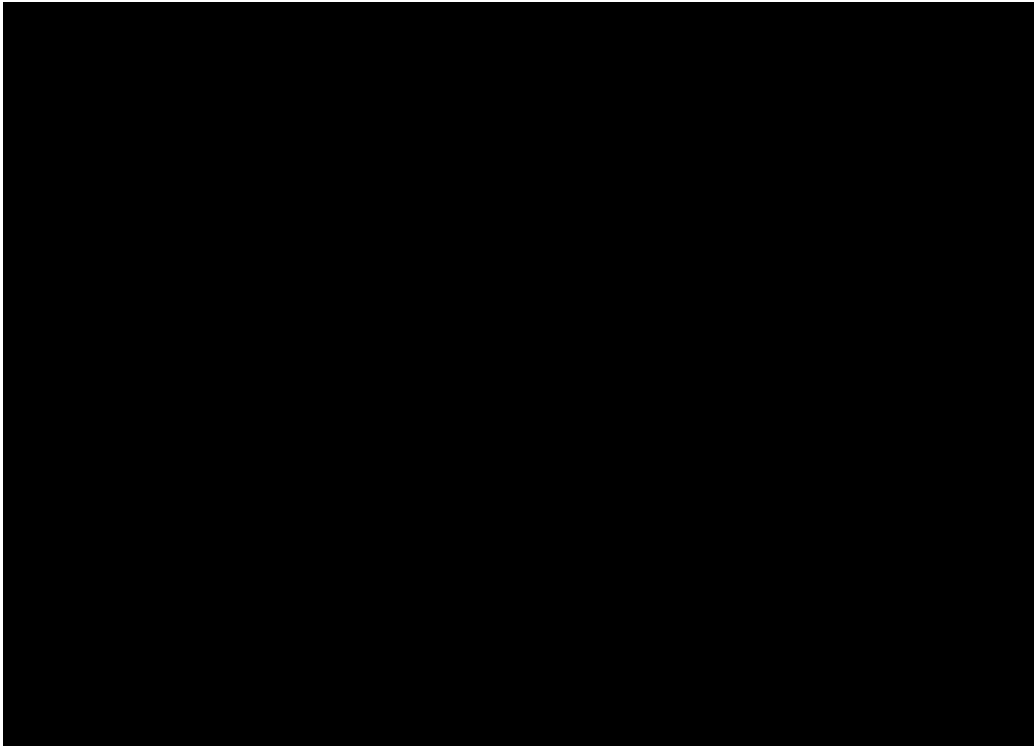
⁶⁵⁶ *Id.*, ¶ 95.

⁶⁵⁷ *Id.*

⁶⁵⁸ *Id.*

⁶⁵⁹ *Id.*

Figure 8 - [REDACTED]



(2) Forecast CALICA Network Revenue

307. Mr. Chodorow's price projections for the But-For Scenario also apply to the Actual

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

(3) Forecast CALICA Network Costs

308. As he did for the But-For Scenario, Mr. Chodorow forecasted the CALICA Network's operating expenses in the Actual Scenario. [REDACTED]

[REDACTED]

⁶⁶⁰ *Id.*, ¶ 104.

⁶⁶¹ *Id.*

⁶⁶² That said, some of these fixed costs can be minimized through mitigation strategies. *See infra*, Part VI.C.1.c)(7).

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

(4) Forecast Capex

309. Mr. Chodorow also projected the capital expenditures necessary to sell the forecasted volumes of aggregates in the Actual Scenario. The capex for draglines and drills is higher than in the But-For [REDACTED]

[REDACTED] Vessel capex is the same as in the But-For Scenario, and operating capex is calculated on a per-ton basis, keeping [REDACTED]

(5) Other Forecasts

310. The projected depreciation, working capital, and income tax figures applied in the But-For Scenario apply equally to the Actual Scenario.⁶⁶⁸

(6) Risk Adjustments to Cash Flows

311. Mr. Chodorow applied the same country-risk adjustments and discount rate used in the But-For Scenario to the Actual Scenario.⁶⁶⁹

⁶⁶³ Expert Report-Darrell Chodorow-Damages-Claimant's Memorial-ENG, ¶ 108.

⁶⁶⁴ *Id.*, ¶¶ 110-112.

⁶⁶⁵ *Id.*

⁶⁶⁶ *Id.*, ¶¶ 129-130.

⁶⁶⁷ *Id.*, ¶¶ 132-135.

⁶⁶⁸ *Id.*, ¶¶ 137-144.

⁶⁶⁹ *Id.*, ¶ 25.

(7) Mitigation of CALICA Network Losses

312. Mr. Chodorow's DCF analysis for the Actual Scenario also reflects steps that Legacy Vulcan could take to mitigate its losses from being unable to quarry La Adelita as a result of Mexico's wrongful conduct.⁶⁷⁰

- *First,* [REDACTED]
- *Second,* [REDACTED]
- *Third,* [REDACTED]
- *Fourth,* [REDACTED]
- *Finally,* [REDACTED]

313. In total, Mr. Chodorow estimated that [REDACTED] could be mitigated through these measures.⁶⁷⁷

* * *

⁶⁷⁰ *Id.*, ¶ 159.

⁶⁷¹ *Id.*, ¶ 95.

⁶⁷² *Id.*, ¶¶ 37, 162.

⁶⁷³ This figure is in 2017 dollars. It is first adjusted to 2015 and then projected into the future at the same rate as margins on CALICA sales in the But-For Scenario. *Id.*, ¶ 163. *See also* Witness Statement-[REDACTED]-Claimant's Memorial-ENG, ¶¶ 71-72.

⁶⁷⁴ *Id.*, ¶¶ 164-165.

⁶⁷⁵ *Id.*, ¶ 166.

⁶⁷⁶ *Id.*, ¶ 167.

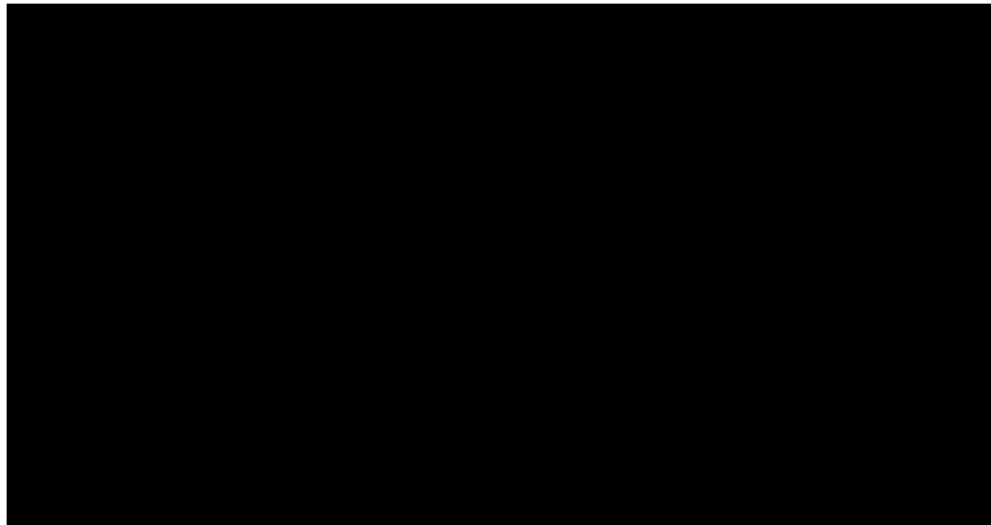
⁶⁷⁷ *Id.*, ¶ 168.

314. Based on the analysis summarized above, Mr. Chodorow concluded that the value of the CALICA Network in the Actual Scenario — *i.e.*, without the ability to quarry La Adelita starting in 2016 — after accounting for mitigation is [REDACTED] as of the 6 December 2015 valuation date for Breach No. 1.⁶⁷⁸

d) Summary of DCF Results Relating to Mexico's Repudiation of the 2014 Agreements (Breach No. 1)

315. The damages suffered by Legacy Vulcan from Mexico's repudiation of the 2014 Agreements, which effectively prevented CALICA from quarrying its largest untapped lot, total [REDACTED] and are summarized in the following table:⁶⁷⁹

Table 4 - [REDACTED]



2. Damages Arising Out of Mexico's Shutdown of El Corchalito (Breach No. 2)

316. To calculate damages suffered by Legacy Vulcan as a consequence of the shutdown of El Corchalito, Mr. Chodorow similarly used the DCF method to calculate the FMV of the CALICA Network as of 24 January 2018 (the date of the Shutdown Order) under (i) a But-For Scenario, where CALICA is able to quarry La Rosita and El Corchalito (but not La Adelita because Mexico had already repudiated the 2014 Agreements and thus precluded CALICA from quarrying

⁶⁷⁸ *Id.*

⁶⁷⁹ *Id.*

that lot) and (ii) an Actual Scenario, where CALICA can quarry only La Rosita from 24 January 2018 onwards.

a) But-For Value of the CALICA Network (Without the Shutdown Order)

317. To calculate the FMV of the CALICA Network in the But-For Scenario as of the date of the Shutdown Order (24 January 2018), Mr. Chodorow considered the same factors discussed above with regard to Breach No. 1 but with certain adjustments mainly related to the different valuation date used for Breach No. 2. Each is described in turn.

(1) Forecast Production and Sales Volumes

318. Mr. Chodorow forecasted CALICA's sales in the But-For Scenario using the same method outlined above with respect to the repudiation of the 2014 Agreements (Breach No. 1).⁶⁸⁰ He relied on a long-term forecast of projected export and local sales as of January 2018 and on a quarrying plan developed by Legacy Vulcan [REDACTED]

[REDACTED]

(2) Forecast CALICA Network Revenue

319. To project CALICA's revenues in the But-For Scenario for Breach No. 2, Mr. Chodorow relied on the same price growth forecasts used in his damages analysis for Breach No. 1.⁶⁸³ [REDACTED]

[REDACTED] The allocation of sales between the U.S. and the local markets would also remain the same as in the But-For Scenario for Breach No. 1.⁶⁸⁵

⁶⁸⁰ See *supra* ¶¶ 270-271.

⁶⁸¹ Expert Report-Darrell Chodorow-Damages-Claimant's Memorial-ENG, ¶ 186.

⁶⁸² *Id.*, ¶ 187.

⁶⁸³ See *supra* ¶ 307.

⁶⁸⁴ Expert Report-Darrell Chodorow-Damages-Claimant's Memorial-ENG, ¶ 188.

⁶⁸⁵ See *supra* ¶¶ 272-275.

(3) Forecast CALICA Network Costs

320. To forecast the CALICA Network's operating costs in the But-For Scenario, Mr. Chodorow used the same method set out above but updated the cost figures to 2018, corresponding to the Breach No. 2 valuation date. Production costs were adjusted in this way, in accordance with the corresponding quarrying plan, as well as transportation costs and U.S. Yards costs. Mr. Chodorow similarly adjusted overhead costs.⁶⁸⁶

(4) Forecast Capex

321. Mr. Chodorow projected the draglines and drills that would be necessary in the But-For Scenario by relying on Legacy Vulcan's corresponding quarrying plan. This projection takes into account the equipment that CALICA bought since 2015 and its cost as of 2017.⁶⁸⁷ He calculated operating capex on the same per-ton basis as outlined above, adjusted for 2015-2017 inflation. Vessel capex is also based on the same maintenance schedule stated above regarding Breach No. 1.⁶⁸⁸

(5) Other Forecasts

322. Mr. Chodorow accounted for depreciation of investments by class using the same relevant depreciation schedules applied in his analysis of Breach No. 1, and based his depreciation schedule of assets existing as of 24 January 2018 on CALICA's 2017 financial statements.⁶⁸⁹ Working capital is assumed to be the same as above. Mr. Chodorow applied a weighted-average income tax rate of [REDACTED] for the entire CALICA Network based on the percentages used in 2017 to allocate income for tax purposes in Mexico (CALICA), the Bahamas (Vulica), and the United States (Legacy Vulcan's U.S. Yards). This calculation takes into account the reduced U.S. corporate tax rate brought about by the 2017 Tax Cuts and Jobs Act.⁶⁹⁰

⁶⁸⁶ Expert Report-Darrell Chodorow-Damages-Claimant's Memorial-ENG, ¶ 188.

⁶⁸⁷ *Id.*, ¶ 189.

⁶⁸⁸ *Id.*

⁶⁸⁹ *Id.*, ¶ 190.

⁶⁹⁰ *Id.*, ¶ 191. Until 2017, the U.S. had a global tax system requiring companies to pay taxes on income earned abroad when it was repatriated to the U.S. The 2017 Tax Cuts and Job Act eliminated this system.

(6) Risk Adjustments to Cash Flows

323. Mr. Chodorow applied the same approach to estimate the country risk and the discount rate he used for Breach No. 1, but adjusted those variables to reflect economic and industry conditions as of January 2018, the valuation date for Breach No. 2. Mr. Chodorow estimated the annual probability of a political risk event at 0.76% and the relevant discount rate at 6.8%.⁶⁹¹ This political-risk-event haircut is the equivalent of adding a country risk premium of 0.81% to the discount rate.⁶⁹²

* * *

324. Based on the analysis summarized above, Mr. Chodorow concluded that the value of the CALICA Network on 24 January 2018 in the But-For Scenario — *i.e.*, assuming CALICA's continued ability to quarry El Corchalito thereafter — is [REDACTED]

b) Actual Value of the CALICA Network (With the Shutdown Order)

325. To calculate the FMV of the CALICA Network in the Actual Scenario, Mr. Chodorow used the same methodology from the But-For Scenario except that the model assumes that CALICA can quarry only La Rosita. Each element of this methodology is discussed next.

(1) Forecast Production and Sales Volumes

326. In the Actual Scenario for Breach No. 2, expected demand is the same as in the But-For Scenario, but CALICA must meet this demand only with production from La Rosita. Legacy Vulcan prepared a quarrying plan detailing how it would go about doing so.⁶⁹³ [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

⁶⁹¹ *Id.*, ¶ 192; Appendix C ¶ 11; Appendix D ¶ 11.

⁶⁹² *Id.*, ¶ 192.

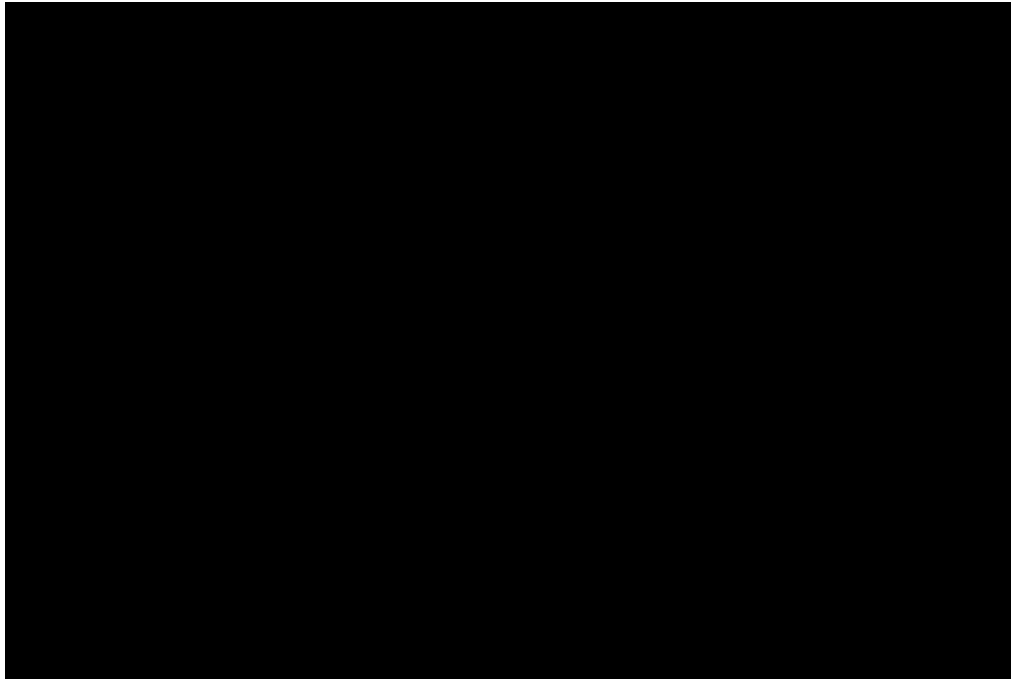
⁶⁹³ *Id.*, ¶ 86.

⁶⁹⁴ *Id.*, ¶ 187.

⁶⁹⁵ *Id.*



Figure 9 - [REDACTED]



(2) Forecast CALICA Network Revenue

327. The projected price for the sale of aggregates in the Actual Scenario is the same as in the But-For Scenario [REDACTED]

[REDACTED] The allocation of sales between these two markets was also maintained.⁶⁹⁹

(3) Forecast CALICA Network Costs

328. Mr. Chodorow calculated the costs for the Actual Scenario relying on the same methodology he used for the But-For Scenario.⁷⁰⁰ Fixed costs will differ only due to early Project closure.⁷⁰¹

⁶⁹⁶ *Id.*

⁶⁹⁷ *Id.*

⁶⁹⁸ *See supra*, Part VI.C.2.a)(2).

⁶⁹⁹ Expert Report-Darrell Chodorow-Damages-Claimant's Memorial-ENG, ¶ 106; Workbook A.

⁷⁰⁰ *See supra* ¶ 320.

⁷⁰¹ Expert Report-Darrell Chodorow-Damages-Claimant's Memorial-ENG, ¶ 188.

(4) Forecast Capex

329. As with Breach No. 1, Mr. Chodorow derived the draglines and drills necessary for this scenario from the corresponding quarrying plan and its above-to-below-water extraction mix. Operating capex and vessel capex follow the same method outlined above.⁷⁰²

(5) Other Forecasts

330. Income taxes for the Actual Scenario are paid at the same rate as in the But-For Scenario, [REDACTED] Depreciation also follows the same method.⁷⁰⁴

(6) Risk Adjustment to Cash Flows

331. Mr. Chodorow applied the same country-risk adjustment and discount rate used in the But-For Scenario.⁷⁰⁵

(7) Mitigation of CALICA Network Losses

332. As he did in his damages analysis for Breach No. 1, Mr. Chodorow accounted for the possibility that Legacy Vulcan could mitigate the damages stemming from Mexico's wrongful shutdown of El Corchalito. [REDACTED]

⁷⁰² *Id.*, ¶ 189.

⁷⁰³ *Id.*, ¶ 191.

⁷⁰⁴ *Id.*, ¶ 190.

⁷⁰⁵ *Id.*, ¶ 192.

⁷⁰⁶ *Id.*, ¶ 193.

⁷⁰⁷ [REDACTED]

Expert Report-Darrell Chodorow-Damages-Claimant's Memorial-ENG, ¶ 193.

⁷⁰⁸ *Id.*

⁷⁰⁹ *Id.*

333. Through these actions, Legacy Vulcan could mitigate [REDACTED] in losses associated with Breach No. 2.

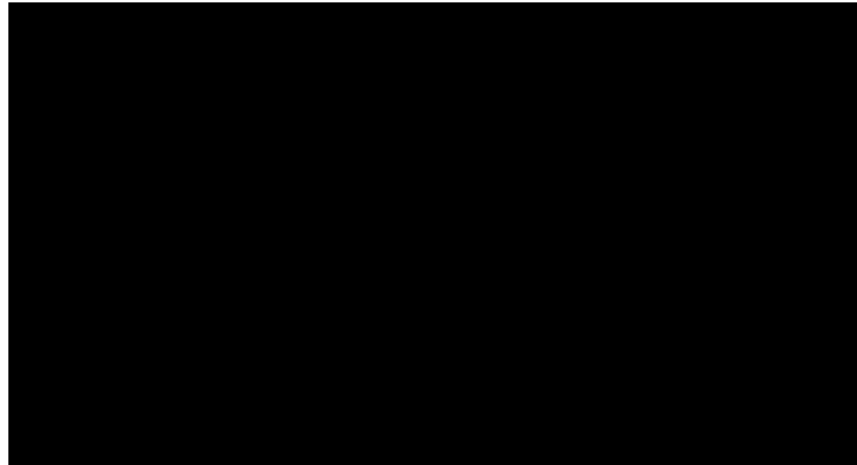
* * *

334. Based on the analysis summarized above, Mr. Chodorow concluded that the value of the CALICA Network on 24 January 2018 in the Actual Scenario — *i.e.*, with CALICA being able to quarry only La Rosita — is [REDACTED]

c) Summary of DCF Results Relating to Mexico's Shutdown of El Corchalito (Breach No. 2)

335. The damages suffered by Legacy Vulcan from the shutdown of El Corchalito total [REDACTED] and are summarized in the following table:

Table 5 - [REDACTED]



3. Damages Arising Out of the Illegally Charged Port Fees (Breach No. 3)

336. As explained in Part II.E.1 above, between 2007 and 2017 API Quintana Roo charged CALICA fees for using CALICA's private port terminal, these fees were deemed illegal by Mexican courts, and Mexico's instrumentalities have nevertheless failed to reimburse them.⁷¹⁰ To calculate the damages resulting from Mexico's failure to reimburse these fees to CALICA, Mr. Chodorow converted the total fees paid to U.S. dollars at the applicable exchange rate as of the date they were paid by CALICA. This amount is [REDACTED] Because any compensation

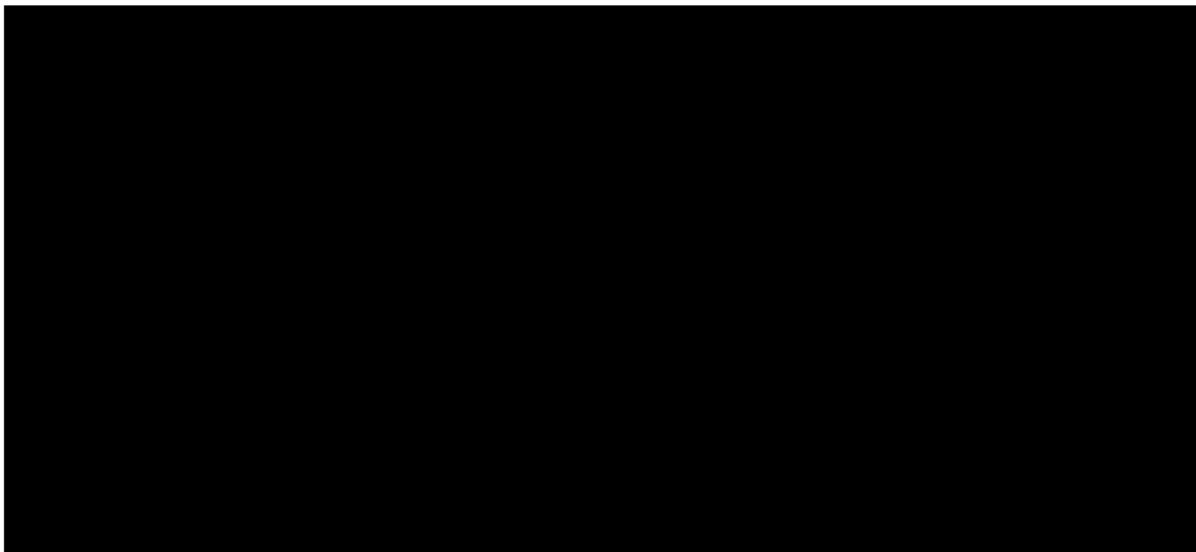
⁷¹⁰ See *supra* ¶¶ 62-69.

will be paid at a much later date, it is necessary to add pre-award interest from the date of each payment to the award date in order to provide full reparation to Legacy Vulcan.⁷⁴¹

* * *

337. In sum, Legacy Vulcan's damages are equivalent to the decrease in the value of the CALICA Network caused by Mexico's unlawful conduct. Because Breach No. 1 and Breach No. 2 materialized on different dates, Mr. Chodorow determined the difference between two FMVs for the CALICA Network: (i) its value disregarding the impact of Mexico's unlawful measures (the But-For Scenario); and (ii) its decreased value reflecting the adverse impact of such measures (the Actual Scenario). Applying this methodology as of the relevant valuation date for each of Breach No. 1 and Breach No. 2, compensation due to Legacy Vulcan for Breach No. 1 is [REDACTED] (calculated as of 6 December 2015) and compensation due for Breach No. 2 is [REDACTED] (calculated as of 24 January 2018). Because each breach eliminated the ability to quarry different, non-overlapping extraction areas, the damages from Breach No. 1 and Breach No. 2 are cumulative. Mexico also owes Legacy Vulcan [REDACTED] as a result of Breach No. 3. In total, damages to Legacy Vulcan before pre-award interest were [REDACTED]. As explained below, Legacy Vulcan is entitled to additional compensation including an adjustment to avoid double taxation, plus pre-award and post-award interest, and arbitration costs. Total compensation including damages, the adjustment to avoid double taxation, and pre-award interest through 30 April 2020 is [REDACTED] million as shown in Table 1 below.

Table 1: [REDACTED]



⁷⁴¹ Expert Report-Darrell Chodorow-Damages-Claimant's Memorial-ENG, ¶ 196.

D. LEGACY VULCAN IS ENTITLED TO PRE-AWARD AND POST-AWARD INTEREST

338. In accordance with the principle of full reparation, Legacy Vulcan is entitled to pre-award interest at a commercially reasonable interest rate that will provide it full compensation for Mexico's violations of NAFTA.⁷¹² Investment tribunals routinely award this type of interest.⁷¹³ For instance, the tribunal in *Vivendi v. Argentina* observed that, "[a]bsent treaty terms or provisions in the governing law to the contrary, it is generally accepted that international tribunals may award interest to an injured claimant; indeed the liability to pay interest is now an accepted legal principle."⁷¹⁴ In this case, NAFTA Article 1135(2)(b) requires the award to reflect "any applicable interest."

339. By being deprived of its investment rights without compensation on the date of the breach, Legacy Vulcan has effectively become a forced lender of Mexico, financing its internationally wrongful conduct from the date of the breach to the date of the Award. Under the principle of full reparation, this financial loss must also be compensated by awarding pre-award interests at a suitable rate.⁷¹⁵ Such a rate would be one compensating both the time value of money and the risk Legacy Vulcan bore.⁷¹⁶ To compensate for time value of money, Mr. Chodorow employed an interest rate based on the one-month yield on U.S. Treasury Bills.⁷¹⁷ The risk that Legacy Vulcan bore as a forced lender was a default by the Mexican Government. This risk is appropriately compensated by applying an interest rate based on the risk premium lenders charge

⁷¹² See John Gotanda, *The Unpredictability Paradox: Punitive Damages and Interest in International Arbitration*, 10(4) JWIT 553, pp. 564-570 (2009) (CL-0095-ENG); Pierre Bienvenu & Martin Valasek, *Compensation for Unlawful Expropriation and Other Recent Manifestations of the Principle of Full Reparation in International Investment Law*, in 50 YEARS OF THE NEW YORK CONVENTION: ICCA INTERNATIONAL ARBITRATION CONFERENCE, 231, p. 261 (A. J. van den Berg ed., 2009) (CL-0096-ENG) ("It is generally acknowledged that, in order to be 'made whole', the investor should also be compensated for this delay, that is, for the period during which he was deprived of monies he could have invested elsewhere as a source of revenue.") (citation omitted).

⁷¹³ *Illinois Central Railroad Co. (U.S.) v. United Mexican States*, US-Mexico General Claims Commission, 4 U.N. Reports of International Arbitral Awards, Award, ¶ 5 (6 December 1926) (CL-0097-ENG) ("[I]nterest must be regarded as a proper element of compensation.").

⁷¹⁴ *Vivendi v. Argentina* (Award), ¶ 9.2.1 (CL-0087-ENG).

⁷¹⁵ *LG&E Energy Corp., et al. v. Argentine Republic*, ICSID Case No. ARB/02/1, Award, ¶ 55 (25 July 2007) (de Maekelt, (P), van den Berg, Rezek) (CL-0098-ENG) ("interest is part of the 'full' reparation to which the Claimants are entitled to assure that they are made whole. In fact, interest recognizes the fact that, between the date of the illegal act and the date of actual payment, the injured party cannot use or invest the amounts of money due.").

⁷¹⁶ Expert Report-Darrell Chodorow-Damages-Claimant's Memorial-ENG, ¶ 198.

⁷¹⁷ *Id.*

on Mexico's sovereign debt.⁷¹⁸ Thus, Mr. Chodorow determined that the appropriate interest rate is Mexico's one month U.S.-dollar borrowing rate, compounded monthly.⁷¹⁹ At the time Mr. Chodorow prepared his Report, pre-Award interest amounted to [REDACTED]

340. To wipe out all the consequences of Mexico's wrongful conduct, the Tribunal should update the sum owed as compensation by awarding interest compounded annually until the Award is rendered. As numerous tribunals have recognized, applying compound interest in this way achieves the full reparation required under international law.⁷²¹ Compound interest ensures that a respondent in breach of international law enjoys no windfall from its wrongful conduct by recognizing the time value of the claimant's losses. It also "reflects economic reality in modern times" where "[t]he time value of money in free market economies is measured in compound interest."⁷²² An award that fails to reflect compound interest and Mexico's risk would be commercially unreasonable.

341. Mexico should also be ordered to pay post-award interest on the quantum of the Award until actual and full payment, even if the Award is converted into a judgment of a court of a State party to the ICSID Convention. For the same reasons given above, post-award interest should also be calculated on a compound basis, in accordance with the prevailing practice of international tribunals.⁷²³

⁷¹⁸ *Id.*, ¶ 199.

⁷¹⁹ *Id.*, ¶ 200.

⁷²⁰ *Id.*

⁷²¹ See, e.g., *Azurix v. Argentina* (Award), ¶ 440 (CL-0028-ENG); *Victor Pey Casado and President Allende Foundation v. Republic of Chile*, ICSID Case No ARB/98/2, Award, ¶¶ 709, 712 (8 May 2008) (Lalive (P), Gaillard, Chemloul) (CL-0099-SPA); *Continental Casualty Company v. Argentine Republic*, ICSID Case No ARB/03/9, Award, ¶¶ 308-313 (5 September 2008) (Sacerdoti (P), Nader, Veeder) (CL-0100-ENG) (hereinafter, "*Continental Casualty v. Argentina* (Award)"); *RREEF Infrastructure et al. v. Kingdom of Spain*, ICSID Case No. ARB/13/30, Award, ¶ 67 (11 December 2019) (Pellet (P), Nikken, Volterra) (CL-0101-ENG).

⁷²² *Continental Casualty v. Argentina* (Award), ¶ 309 (CL-0100-ENG).

⁷²³ *Perenco Ecuador Limited v. Republic of Ecuador*, ICSID Case No. ARB/08/6, Award, ¶ 1023 (27 September 2019) (Tomka (P), Kaplan, Thomas) (CL-0102-ENG); *9REN Holdings S.A.R.L. v. Kingdom of Spain*, ICSID Case No. ARB/15/15, Award, ¶¶ 427-428 (31 May 2019) (Binnie (P), Veeder, Haigh) (CL-0103-ENG).

E. THE AWARD MUST BE ADJUSTED TO AVOID DOUBLE TAXATION

342. The principle of full reparation dictates that the Award should protect Legacy Vulcan against levies that would prevent it from being restored to the economic equivalent of its position had the unlawful measures not occurred. Consequently, Legacy Vulcan should be protected from the consequences of taxes that would not have been payable in the absence of Mexico's wrongful measures and that would effectively result in double taxation.

343. As Mr. Chodorow explains, he performed DCF-damages analyses of the CALICA Network on an after-tax basis.⁷²⁴ In doing so, he reduced the CALICA Network cash flows to reflect U.S. income-tax obligations associated with the income earned from the U.S. Yards.⁷²⁵ Accordingly, the lost profits attributable to the U.S. Yards have already been reduced to account for U.S. taxes payable on that income.⁷²⁶ Because an award ordering monetary compensation to Legacy Vulcan would be taxed at a combined U.S. federal and state income corporate tax rate of [REDACTED],⁷²⁷ Legacy Vulcan's income from the U.S. Yards will effectively be taxed twice.⁷²⁸

344. To eliminate the effect of double taxation of income earned on the U.S. Yards, Mr. Chodorow adjusted the damages for Breach No. 1 and Breach No. 2 upward, assuming that the Award will be taxed at the U.S. corporate tax rate of [REDACTED] applicable to VMC's income.⁷²⁹ As set out in Table 1 above, the damages arising out of Breach No. 1 and Breach No. 2 must be adjusted by [REDACTED] and [REDACTED], respectively, to avoid double taxation on Legacy Vulcan's income from the U.S. Yards and thus ensure that Legacy Vulcan receives damages representing the same after-tax income it would have received from the U.S. Yards absent Mexico's breaches.

345. Legacy Vulcan is entitled to be taxed only once on its income from the U.S. Yards; it should not be subjected to double taxation of the same income. The compensation determined

⁷²⁴ Expert Report-Darrell Chodorow-Damages-Claimant's Memorial-ENG, ¶ 202.

⁷²⁵ *Id.*

⁷²⁶ [REDACTED]. See *Id.*, ¶ 201.

⁷²⁷ Witness Statement-[REDACTED]-Claimant's Memorial-ENG, ¶ 27.

⁷²⁸ Expert Report-Darrell Chodorow-Damages-Claimant's Memorial-ENG, ¶ 203.

⁷²⁹ *Id.*, ¶ 204. Mr. Chodorow did not adjust damages arising out of Breach No. 3 because port fees have no effect on income earned by the U.S. Yards. *Id.*, ¶ 205.

in the Award should be calculated, and should be payable, in an amount that eliminates the effect of double taxation.⁷³⁰

F. LEGACY VULCAN IS ENTITLED TO ARBITRATION COSTS AND EXPENSES

346. The principle of full reparation also requires that Legacy Vulcan be made whole for costs incurred in this arbitration, as well as legal expenses. As tribunals have increasingly recognized, a non-prevailing respondent should bear the costs of arbitration and the prevailing claimant's reasonable costs of representation as part of full reparation.⁷³¹ Legacy Vulcan will submit a statement of its fees and costs at an appropriate time, as the Tribunal may order.

VII. REQUEST FOR RELIEF

347. For the foregoing reasons, Legacy Vulcan respectfully requests that the Tribunal render an award in its favor:

- a. Upholding the claims asserted by the Claimant in this proceeding;
- b. Declaring that the Respondent has breached NAFTA and applicable principles of international law:
 - i. By failing to accord Claimant's investments, including CALICA, fair and equitable treatment in violation of Article 1105; and
 - ii. By failing to observe the obligations it has assumed regarding the Claimant's investments (an international obligation that is applicable through the most-favored-nation clause of Article 1103 of NAFTA);
- c. Determining that this breach has caused damages to Claimant;
- d. Ordering the Respondent to pay to the Claimant compensation, in accordance with NAFTA and customary international law, in an amount sufficient to provide full reparation to the Claimant for the damages incurred as a result of the Respondent's conduct in violation of NAFTA, including:

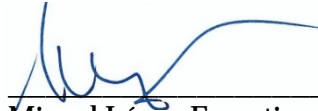
⁷³⁰ If the Tribunal were to find that Legacy Vulcan is not entitled to this adjustment because taxes are paid by VMC and not by Legacy Vulcan, it would also be appropriate to apply a U.S. tax rate of zero in calculating the lost profits because the taxes on profits earned by the U.S. Yards are also paid by VMC rather than Legacy Vulcan. Expert Report-Darrell Chodorow-Damages-Claimant's Memorial-ENG, ¶ 207.

⁷³¹ See, e.g., *British Caribbean Bank Ltd v. Government of Belize*, PCA Case No. 2010-18, Award, ¶¶ 317, 325 (19 December 2014) (van den Berg (P), Oreamuno Blanco, Beechey) (CL-0104-ENG) (holding that "the general principle should be that the 'costs follow the event,' save for exceptional circumstances" and awarding claimant costs of arbitration and costs of legal representation and assistance in the arbitration proceedings.).

- i. Compensation for damages arising out of Mexico's repudiation of the 2014 Agreements in the amount of [REDACTED]
 - ii. Compensation for damages arising out of Mexico's shutdown of CALICA's operations in El Corchalito in the amount of [REDACTED]
 - iii. Compensation for port fees that Mexico illegally charged CALICA and never reimbursed in the amount of [REDACTED]
 - iv. Compensation of [REDACTED]
 - v. Pre-Award compound interest at a rate reflecting the cost of short-term borrowing by the Government of Mexico from the date of each breach to the date of the award, and post-Award compound interest also reflecting the cost of short-term borrowing by the Government of Mexico from the date of the Award until actual and full payment by Mexico, even if the Award is converted into a judgement of a court of a State party to the ICSID Convention;
- e. Giving Respondent the option to pay less than the full amount ordered above for items (i), (ii), (iv) and (v) if Mexico's instrumentalities, (x) within three months from the issuance of the Award, were to amend the POEL to expressly allow quarrying operations by CALICA in La Adelita, *and* (y) immediately close all administrative and judicial proceedings against CALICA arising out of the inspection of El Corchalito, allowing CALICA to resume operations normally with no penalties to CALICA or any of its affiliates or any of their respective employees, agents, advisors or other representatives (collectively, the "Settlement Measures"), in which case Respondent shall pay the damages effectively incurred up to the performance of the Settlement Measures;
- f. Ordering Respondent to pay all costs and expenses of this arbitration proceeding, including the fees and expenses of the Tribunal and the cost of legal representation, plus interest thereon; and
- g. Such other or additional relief as may be appropriate under the applicable law or that may otherwise be just and proper.⁷³²

⁷³² Legacy Vulcan respectfully reserves its right to pursue additional claims that may arise out of retaliatory measures by Mexico.

Respectfully submitted,



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GLOSSARY

Term	Description
2014 Agreements	Collectively, the Total Regularization Scheme, the MOU, and the Amended MOU.
Amended MOU	The MOU, as amended on 13 May 2015.
API	Integral Port Administration (<i>Administración Portuaria Integral</i>), a state-owned entity charged with overseeing and running ports in Mexico. Each seaside state has an API.
API Quintana Roo	The API overseeing the ports of the State of Quintana Roo.
API Quintana Roo Concession	The concession granted by the SCT to API Quintana Roo in 1994 to operate port facilities in the State of Quintana Roo.
BIT	Bilateral Investment Treaty
CALICA	Calizas Industriales del Carmen, S.A. de C.V., a Mexican corporation indirectly owned and controlled by Legacy Vulcan.
CALICA Port Concession	The concession granted in 1987 by the SCT to CALICA to build and operate a port in Punta Venado.
CALICA Tax	An extraction tax adopted in 2007 by the State of Quintana Roo that applies almost exclusively to CALICA.
CEMDA	Mexican Center for Environmental Law (<i>Centro Mexicano de Derecho Ambiental</i>)
<i>Cenote</i>	A natural pit, or sinkhole, revealing a pool of water.
Committee to Amend the POEL	A committee created on 30 October 2014 by the SEMARNAT, the State of Quintana Roo, and the Municipality of Solidaridad to amend the POEL.
Corchalito/Adelita Federal Environmental Authorization	An environmental permit granted by the Mexican Federal Government authorizing CALICA to quarry petrous materials below the water table in El Corchalito and La Adelita.
Corchalito/Adelita State Environmental Authorization	An environmental permit granted by the State of Quintana Roo authorizing CALICA to quarry petrous materials above the water table in El Corchalito and La Adelita.
Cozumel	An island in Quintana Roo, Mexico.

Term	Description
CUSTF	Authorization for Soil-Use Change in Forested Terrains (<i>Autorización de Cambio de Uso del Suelo en Terrenos Forestales</i>), a permit granted by SEMARNAT to remove forested terrains.
CSL	Canada Steamship Lines
Dragline	An excavator used to extract rock (especially underwater) by means of a giant bucket hung from a crane by a series of cables.
El Corchalito	One of the plots of land indirectly owned by Claimant in Quintana Roo containing limestone reserves, which was being quarried until PROFEPA shut down CALICA's quarrying operations there in January 2018.
Environmental Impact Statement	Filing made by CALICA to obtain the Corchalito/Adelita Federal Environmental Authorization.
FTC	NAFTA Free Trade Commission
FY	Fiscal Year
Grupo ICA	Grupo Ingenieros Civiles Asociados, a Mexican industrial and construction conglomerate.
INDAABIN	Mexico's National Institute of Administration and Appraisals of National Assets (<i>Instituto de Administración y Avalúos de Bienes Nacionales</i>)
INE	Mexico's National Institute of Ecology (<i>Instituto Nacional de Ecología</i>)
IUSCT	Iran-United States Claims Tribunal
La Adelita	One of the plots of land indirectly owned by Claimant in Quintana Roo containing limestone reserves, which has yet to be quarried.
La Rosita	One of the plots of land indirectly owned by Claimant in Quintana Roo containing limestone reserves, which is being quarried.
Legacy Vulcan	Legacy Vulcan, LLC, a limited liability company organized and existing under the laws of Delaware, United States of America, and the Claimant in this arbitration.
MOU	The Memorandum of Understanding, an agreement by and among CALICA, the SCT, the State of Quintana Roo, API Quintana Roo, and the Municipality of Solidaridad, dated 12 June 2014.

Term	Description
Municipality of Cozumel	A municipality in Quintana Roo, Mexico, where La Rosita is located.
Municipality of Solidaridad	A municipality in Quintana Roo, Mexico, where El Corchalito and La Adelita are located.
Panamax vessel	A cargo ship of medium size, up to 294 meters, capable of passing through the lock chambers of the original Panama Canal.
POEL	Program for Local Environmental Regulation (<i>Programa de Ordenamiento Ecológico Local</i>), the zoning regime applicable in Solidaridad since 2009.
POET	Program for Territorial Environmental Regulation (<i>Programa de Ordenamiento Ecológico Territorial</i>), the zoning regime applicable to the Cancún Tulum Corridor from 2001 to 2009.
Port Terminal	The terminal built by CALICA in Punta Venado to ship aggregates extracted from its quarrying operations in La Rosita, El Corchalito, and La Adelita. The Port Terminal comprises a Public Terminal and a Private Terminal.
Private Terminal	Terminal in Punta Venado used to ship CALICA's production aboard Vulica or CSL vessels.
PROFEPA	Mexico's federal environmental enforcement agency, (<i>Procuraduría Federal de Protección al Ambiente</i>)
Public Terminal	Terminal in Punta Venado used to dock ferries, cruise ships, and passenger ships.
Punta Venado	One of Claimant's land plots in Quintana Roo, where the Port Terminal is located.
Quintana Roo	A Mexican state in the Yucatán Peninsula.
RAPICA	Rancho Piedra Caliza, S.A. de C.V., a Mexican subsidiary of CALICA and the owner of La Rosita, El Corchalito, and La Adelita.
Sac-Tun	A Mayan name used to refer to CALICA's quarries and/or CALICA.
SCT	Mexico's Ministry of Communications and Transportation (<i>Secretaría de Comunicaciones y Transportes</i>)

Term	Description
SEDUE	Mexico's Ministry of Urban Development and the Ecology (<i>Secretaría de Desarrollo Urbano y Ecología</i>). This agency ceased to exist in 1992 and was replaced by the INE and PROFEPA.
SEMARNAT	Mexico's Ministry of the Environment and Natural Resources (<i>Secretaría de Medio Ambiente y Recursos Naturales</i>)
Shutdown Order	The order issued by PROFEPA on 22 January 2018 mandating the closure of CALICA's quarrying activities below the water table at El Corchalito and further precluding those activities in La Adelita.
SIMAP	Quintana Roo's Ministry of Infrastructure, Environment and Fishery (<i>Secretaría de Infraestructura, Medio Ambiente y Pesca</i>)
Total Regularization Scheme	An agreement by and among the SCT and CALICA, dated 14 June 2014, in which API Quintana Roo acted as a witness.
UGA	Environmental Management Units (<i>Unidad de Gestión Ambiental</i>), the smallest territorial zoning unit.
U.S. Yards	Legacy Vulcan's shipyards along the U.S. Gulf Coast and Atlantic seaboard used for distribution of CALICA products.
VMC	Vulcan Materials Company, the parent company of Legacy Vulcan.
Vulica	Vulica Shipping Company, Limited, which ships the aggregates from the Port Terminal to the U.S. Yards.
Vulica/ICA	Vulica/ICA Distribution Company was a company formed by the joint venture between Legacy Vulcan and Grupo ICA to carry out sales and marketing operations in the United States. This function is now performed by Vulcan Construction Materials, LLC.
Water table	The upper level of an underground surface in which the soil or rocks are permanently saturated with water.