

**MANFRED LACHS SPACE LAW MOOT COURT COMPETITION 2017**

Team No. 2

IN THE INTERNATIONAL COURT OF JUSTICE,

AT THE

PEACE PALACE, THE HAGUE

Case Concerning Lunar Facilities and Withdrawal from the Outer Space Treaty

*The Republic of Perovsk*

v.

*The Republic of Titan*

ON SUBMISSION TO THE INTERNATIONAL COURT OF JUSTICE

MEMORIAL FOR THE APPLICANT

THE REPUBLIC OF PEROVSK

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## QUESTIONS PRESENTED

- I -

Whether Perovsk was obligated to notify Titan regarding the activities at the *Tekla* Station?

- II -

Whether Perovsk has the right to continue its activities on the Sea of Tranquility?

- III -

Whether Titan violated International law by failing to disclose its discoveries on the Moon?

- IV -

Whether Titan is liable for the damage to Perovsk's processing stations?

## STATEMENT OF FACTS

### THE PARTIES

Perovsk and Titan are neighboring republics with a long history of peaceful relations, a common language and shared heritage. Political disagreements between the nations are rooted in the differing economic policies of the nations. While Perovsk values individualism and *laissez-faire* economics, Titan favors State involvement and public-private partnerships in industry. Successive governments in Titan have reaffirmed their belief that outer space belongs to all mankind.

### TITAN'S EARLY SPACE-FARING OPERATIONS

Titan briefly explored outer space with their robotically operated missions *Novum Organum-1* and *Novum Organum-2*, alighting on the Moon's Sea of Tranquility. These missions were contingent on the purchase of launch stage and descent stage services from Perovsk. The artefacts and equipment from the *Novum Organum* missions are still present on the Sea of Tranquility. Presently, these artefacts remain out of use.

### CONTEMPORARY DEVELOPMENTS IN SPACE-FARING

The governments of Perovsk and Titan engaged in co-operative space projects. Both the nations pursued complementary specializations in technologies required for space activities. Perovsk specialized in developing launch and propulsion equipment, and evolved technologies for materials processing and manufacturing in outer space. Titan excelled in space design and scientific research.

### LUNAR STATIONS ON THE SEA OF TRANQUILITY

Titan began operations on *Mondiale* Lunar Station, on the Sea of Tranquility, in 2019. The *Mondiale* spanned 10 sq. m. and had a mix of scientific operations, including lunar atmosphere testing. The *Mondiale* was launched from Perovsk's *La Mancha* spaceport. Perovsk conducted independent reviews of the station's various capabilities, including the lunar atmosphere experiments, prior to the launch. Titan registered the *Mondiale* with the United Nations and also put it on its national registry of space objects.

Perovsk began operations on the *Tekla* station, on the Sea of Tranquility, in 2022. *Tekla* was made with the considerable involvement of the commercial space sector. Perovsk's officials made public statements expressing hope for a commercial lunar economy. The main private participants were Fireskin Ltd. [hereinafter "Fireskin"] and One-Zero Ltd. [hereinafter "One-Zero"], both of which are companies incorporated in Perovsk. Perovsk granted mission authorization to Fireskin contingent on the maintenance of a 5-km safe zone from the *Mondiale* station.

#### **THE MOBILE SURVEYING UNIT**

In 2024, Titanite Mobile Surveying Unit [hereinafter "rover"] was launched at the behest of Titan by Perovsk aboard its reusable lunar shuttle from Perovsk's *La Mancha* spaceport. Titan fully disclosed the scientific capabilities of the rover to Perovsk before the launch.

#### **THE DISCOVERY OF ILMENITE**

In 2025, Perovsk reported that its *Tekla* station was in an area rich in ilmenite, a basaltic Titanium ore. Perovsk criticized Titan for not disclosing its discoveries of ilmenite near the *Mondiale* installation. Scholarly discourse in Titan focused on how hiding property from Perovsk was justified. The allegations were criticized in Titan for being unfounded.

## **REGOLITH PROCESSING EQUIPMENT**

Perovsk delivered a 3D printer and equipment capable of creating metal powder for the printer's use from lunar materials. This was done to test the feasibility of creating structural components for a launch site and refueling station to be operated by Fireskin. The equipment was installed at three mineral rich sites, at least 15-km from the *Mondiale* station. The installation of the processing equipment allowed Fireskin's operations to become more efficient. Perovsk informed the UN Secretary General of its expanded footprint on 12<sup>th</sup> August 2025.

## **WITHDRAWAL FROM THE OUTER SPACE TREATY**

Perovsk sent a formal withdrawal notice to the Depository Governments of the Outer Space Treaty [hereinafter, "OST"] on 26<sup>th</sup> January 2026. Receipt of the same, was acknowledged by Depository Governments on 28<sup>th</sup> January 2026. Perovsk's withdrawal was complete on 28<sup>th</sup> January 2027.

## **DISRUPTION IN SCIENTIFIC RESEARCH**

Titan began noticing disruptions in its lunar atmosphere testing at the *Mondiale* station. These disruptions only began post the regolith processing equipment becoming functional. The processing unit was, however, releasing only trace amounts of oxygen into the lunar atmosphere.

## **THE COLLISION**

In February 2027, concerned that the pulverization activities were disrupting Titan's scientific research, Titan sent across its rover to inspect the processing station located within 20-km of *Mondiale*. This was done without prior consultation or notification with Perovsk or Fireskin. The transmission of the rover was interrupted by a solar event disrupting communication, the three-

second communication gap once the communication was restored and the steepness and looseness of the lunar regolith near the regolith pulverizing installation. The rover collided with the installation. The installation remains out of use.

#### **THE *NOVUM ORGANUM-1* SITE**

The inspection confirmed that the installations had been releasing trace amounts of Oxygen into the tenuous lunar atmosphere, enough to account for the anomalous readings. The continuing regolith pulverization was also accused of spoiling the non-functional *Novum Organum-1* landing and exploration sites, and disrupting the lunar environment.

#### **THE PROCEEDINGS**

Titan sent a *demarche* seeking cessation of the remaining regolith processing equipment citing impermissible appropriation and despoliation of the *Novum Organum-1* site. Perovsk responded by stating that their authorization of the mission was contingent on a 5-km safe zone from *Mondiale* and their activities were permissible and thus, cessation was not warranted. Fireskin claimed that the installation could have been placed elsewhere had Titan disclosed its discoveries on the Moon. Further, Perovsk claimed reparations for the damage caused to its installation. The resulting dispute was recommended to the International Court of Justice [hereinafter, "ICJ"]. Both the parties submit to the jurisdiction of the ICJ.

#### **THE CLAIMS**

Perovsk requests the ICJ to adjudge and declare that:

1. Perovsk was under no obligation to notify or consult Titan about activities at the *Tekla* station, and that under the principles of *ex aequo et bono*, Perovsk has the right to continue its activities on the Moon.

2. Titan violated international law by failing to disclose its discoveries on the Moon, that Titan failed to notify Perovsk before inspecting its lunar facilities, and that Titan is liable for the damage to Perovsk's property on the Moon.

Titan requests the ICJ to adjudge and declare that:

1. Perovsk's activities on the Moon violated international law by failing to consult with Titan, and that Perovsk must be compelled to cease its lunar processing and production activities, the despoliation of the Novum Organum-1 site, and the impermissible appropriation of the Moon.

2. Titan was permitted to inspect Perovsk's processing stations, and is not liable to Perovsk for damages incurred.

#### **THE RELEVANT TREATIES**

Both the republics are a party to the Liability Convention, the Registration Convention, the Return and Rescue Agreement and the Vienna Convention of the Law of Treaties. Titan is also a party to the Outer Space Treaty and the Moon Treaty. Perovsk has withdrawn from the Outer Space Treaty.

## TIMELINE OF EVENTS

TIME	EVENT
1970s	Titan undertakes the <i>Novum Organum</i> missions on the Sea of Tranquility
2019	Titan begins operations on the <i>Mondiale</i> lunar station. Perovsk sets up <i>Tekla</i> .
2024	Titan launches a mobile surveying unit.
2025	Perovsk sets up processing stations on the Sea of Tranquility; Titan notices anomalous readings on the Sea of Tranquility
2027	Perovsk withdraws from the Outer Space Treaty; Titan sends its rover to inspect Perovsk's processing unit without consultation. Rover crashes.

## SUMMARY OF ARGUMENTS

### **1. PEROVSK WAS UNDER NO OBLIGATION TO CONSULT TITAN REGARDING THE ACTIVITIES AT THE TEKLA STATION.**

Perovsk exercised due regard to the corresponding interests of Titan by authorizing Fireskin's mission contingent on maintaining a 5-km distance from the *Mondiale* station. Further, Fireskin ensured that the equipment was located at a minimum distance of 15-km from Titan's facilities. This was considered reasonable at the time of establishment, especially considering the rapid escape of gases from the lunar atmosphere. Therefore, Perovsk had no reason to believe that the pulverization may cause harmful interference in Titan's tests and was not obligated to consult Titan.

### **2. UNDER THE PRINCIPLE OF *EX AEQUO ET BONO*, PEROVSK HAS THE RIGHT TO CONTINUE ITS ACTIVITIES ON THE MOON.**

The OST permits use of outer space. This is only restricted by the principle of non-appropriation which merely prohibits any sovereign claims to the territory. Moreover, satellites are widely allowed to occupy the GSO, which is also a limited natural resource. Further, deciding *ex aequo et bono* also allows the ICJ to draw analogies from other similar regimes like the high seas where exploitation is permitted, as long as it is not done to the exclusion of other States. Thus, Perovsk's pulverization of the lunar regolith amounted to permissible use, as it did not stake any permanent claim over the territory, or exclude other States from such use.

Further, Perovsk is not responsible to Titan for any despoliation of the *Novum Organum-1* site. This is because Titan's cultural interest in the preservation of the dysfunctional *Novum Organum-1* site amounts to a claim in perpetuity after its functional life. This amounts to



appropriation. Further, non-material interests like cultural property rights are not given recognition in space law. This is because cultural rights inherently involve the idea of “heritage”, which was rejected by most space-faring nations by not signing the Moon Treaty. The idea of cultural heritage is also tied to the idea of territoriality, which is prohibited by the principle of non-appropriation. In any case, even if such cultural interests are recognized by the ICJ, equity calls for primacy to be given to the value of functionality over non-material interests of traditional space-faring nations. This is crucial to promote space-faring among a wider class of nations.

Lastly, cessation is not the appropriate remedy. Any harm arising out of lawful activities is permissible, as long as reasonable measures were employed to prevent the same. Therefore, Perovsk has a right to continue its activities on the Moon.

### **3. TITAN VIOLATED INTERNATIONAL LAW BY FAILING TO DISCLOSE ITS DISCOVERIES ON THE MOON.**

Since Titan had exclusive control over any record or evidence of the activities of its rover, the ICJ may rely on circumstantial evidence in the absence of any direct evidence to the contrary. From 2021, Titan’s scientific community started building pressure on the government to receive lunar regolith samples for scientific testing. Three years later, a rover was sent by Titan to the Moon with the ability to robotically collect and analyze samples. The rover’s tracks were found near *multiple* ilmenite deposits, establishing Titan’s discovery of such minerals beyond reasonable doubt. Further, Perovsk submits that the ICJ can assess the “feasibility” or “practicability” of the disclosure, as they are not reliant on mere subjective judgment of the States. This is because absolute discretion for disclosure under Article XI is contrary to the

objects and purposes of the treaty provision. Perovsk further submits that certain exceptions to disclosure like commercial interests and national security have been concretized in space law. Extension of such exceptions to allow Titan to conceal information to hamper legitimate commercial interests is inequitable and impermissible. In any case, Titan has breached its obligation of good faith to provide reasons for non-disclosure of the activity. Therefore, Titan is responsible for not disclosing its discoveries.

#### **4. TITAN IS LIABLE FOR THE DAMAGE TO PEROVSK'S PROCESSING STATIONS.**

Titan procured the launch of the rover which collided with Fireskin's installations and is therefore a co-launching State along with Perovsk. However, Perovsk's status as a co-launching State does not preclude it from claiming damages under the Liability Convention, which must be interpreted in line with its victim oriented nature. Article VII of the Liability Convention prohibits a national of a State from claiming damages only from that *particular* launching State, not other co-launching States. Admittedly, the Liability Convention calls for joint-liability of co-launching States. However, this must be ordinarily interpreted to restrict such joint liability to damages arising from the launch. This interpretation is in conformity with the fault based regime envisaged by the Liability Convention for damages in outer space. 'Fault' can be committed only by the State which has jurisdiction and control over the space object, and not by other co-launching States. Therefore, in the present case, holding Perovsk jointly liable will be akin to absolute liability in outer space, thus defeating the provisions of the Convention.

Further, Titan is liable for the damage under Article III of the Liability Convention because Titan's failure to notify Perovsk before the inspection was a negligent act in the given

circumstances, and thus constitutes fault. Moreover, this fault was the proximate cause of the damage because the failure to notify was the *conditio sine qua non* of the damage and the damage was reasonably foreseeable from the said fault. Titan's lack of knowledge of the topography of the lunar regolith was a major contributor, *but for* which the damage would not have occurred. This could have been corrected through a process of notification and prior consultation. Reasonable foreseeability requires the broad class of damage, and not specific harms to be foreseeable. Titan, in its breach of due diligence, could have reasonably foreseen some damage occurring as a result. Further, minor natural disturbances like the solar event are considered to be foreseeable in outer space due to its susceptibility to such phenomena. Therefore, such disturbances are considered to be only concurrent causes, and do not mitigate liability.

In any case, even if liability under the Liability Convention is not accepted, Titan is liable under general International law. This is because the requirements of a breach of an obligation, and a causal link between such breach and the resultant damage are both satisfied.

## ARGUMENTS ADVANCED

### **1. PEROVSK WAS UNDER NO OBLIGATION TO CONSULT TITAN REGARDING THE ACTIVITIES AT THE TEKLA STATION.**

1. Perovsk has placed regolith processing equipment [hereinafter, “processing stations”] on the Moon.<sup>1</sup> These processing stations are situated at least 15-km away from Titan’s *Mondiale* station. They have been utilizing the lunar regolith to make powder for use in 3D printers. The processing stations have been releasing trace amounts of Oxygen into the lunar exosphere as a by-product of the processing.<sup>2</sup>

2. Perovsk submits that it has no obligation to consult Titan because *first*, it exercised “due regard” [A]; and *second*, it did not have “reason to believe” that its activities would cause “potentially harmful interference” with Titan’s activities [B].

#### **A. PEROVSK EXERCISED ‘DUE REGARD’.**

3. States are obligated to exercise “due regard” to the “corresponding interests” of other States.<sup>3</sup> ‘Due regard’ refers to a reasonable standard of care or attention.<sup>4</sup> This is an obligation of conduct, and not result.<sup>5</sup> Therefore, the obligation is *only* to take *reasonable measures* to ensure that the existing interests of other States are not adversely affected.<sup>6</sup> ‘Due regard’ can be exercised by granting licenses only to those private entities that undertake to respect the interests

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<sup>1</sup> *Compromis* §15.

<sup>2</sup> *Compromis* §21.

<sup>3</sup> Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies, *entered into force* Oct. 10, 1967, Article IX, U.S.T. 2410, 610 U.N.T.S. 205 [OST]; Sergio Marchisio, *Article IX*, in I COLOGNE COMMENTARY ON SPACE LAW 169, 175 (Stephan Hobe *et al.* eds. 2009) [I COLOGNE COMMENTARY].

<sup>4</sup> Marchisio, *id.*

<sup>5</sup> Timo Koivurova, *Due Diligence*, 3 MAX PLANCK ENCYCLOPEDIA OF PUBLIC INTERNATIONAL LAW 236, 238 (R. Wolfrum ed., 2012).

<sup>6</sup> *id.*

of other States.<sup>7</sup>

4. Perovsk ensured that the license and authorization granted to Fireskin and One-Zero were contingent on establishing a 5-km safe-zone near the *Mondiale*.<sup>8</sup> This distance was considered to be sufficient for the preservation of Titan's interests at the time of establishment.<sup>9</sup> Fireskin duly complied by setting up its processing station at least 15-km away from Titan's facilities.<sup>10</sup> Therefore, Perovsk exercised due regard.

**B. PEROVSK DID NOT HAVE REASON TO BELIEVE THAT ITS ACTIVITIES WOULD CAUSE POTENTIALLY HARMFUL INTERFERENCE WITH TITAN'S ACTIVITIES.**

5. Perovsk's pulverization of the lunar regolith led to the release of Oxygen molecules, which caused the anomalous readings in *Mondiale's* atmospheric testing facilities. However, the said release was only in *trace* quantities, and only into the exosphere of the Moon.<sup>11</sup> The OST confers an obligation to hold appropriate consultations on a State *only* when the state has "reason to believe" that its activities, or those of its nationals, can cause "potentially harmful interference" to the activities of other States.<sup>12</sup> The standard for such interference has been set to be any such activity which may contravene the basic principles of the Outer Space Treaty [hereinafter, "OST"] – such as the duty of due regard and co-operation.<sup>13</sup>

6. All activities in space do not constitute potentially harmful interference to activities of

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<sup>7</sup> Marchisio *supra* note 3, at 176; Outer Space Act 1986, c.38 § 5 (Eng.).

<sup>8</sup> *Compromis* §7.

<sup>9</sup> *Compromis* §7.

<sup>10</sup> *Compromis* §7.

<sup>11</sup> *Compromis* § 21.

<sup>12</sup> Article IX, OST.

<sup>13</sup> Michael C. Mineiro, *FY-1C and USA-193 ASAT Intercepts: An Assessment of Legal Obligations under Article 9 of the Outer Space Treaty*, 34 JOURNAL OF SPACE LAW 321, 337 (2008); GEORGE T. HACKET, *SPACE DEBRIS AND THE CORPUS JURIS SPATIALIS* CARL Q. CHRISTOL, *THE MODERN INTERNATIONAL LAW OF OUTER SPACE*, Vol. 2, 123 (1994).

others.<sup>14</sup> This was made clear in USA's position regarding its obligation to consult under Article IX before destroying its satellite – USA-193. It contended that it was not obligated to consult other States since it exercised 'due regard' by intercepting the satellite at a suitable orbit.<sup>15</sup> Thus, it had no reason to believe that it would cause potentially harmful interference to another State's activities.<sup>16</sup>

7. Perovsk submits that it had no obligation to consult since there was no reason to believe that the release of trace amounts of Oxygen would cause potentially harmful interference to Titan's activities. The exosphere of the Moon does not retain Oxygen molecules long enough to reasonably lead to a threat of accumulation, due to a weak gravitational force.<sup>17</sup> Moreover, the processing stations were established at a minimum distance of 15-km from *Mondiale*,<sup>18</sup> with 'due regard' to Titan's interests.<sup>19</sup>

8. Thus, Perovsk had no reason to believe that the Oxygen release will adversely affect Titan's tests. Therefore, it had no obligation to consult Titan under Article IX regarding the activities at the *Tekla* station.

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<sup>14</sup> Marchisio, *supra* note 3.

<sup>15</sup> Michael C. Mineiro, *FY-1C and USA-193 ASAT Intercepts: An Assessment of Legal Obligations under Article 9 of the Outer Space Treaty*, 34 JOURNAL OF SPACE LAW 321, 351 (2008).

<sup>16</sup> U.S. Department of Defense News Transcript, DoD News Briefing with Deputy National Security Advisor Jeffrey, 350 (Feb. 14, 2008), <http://www.spacelaw.olemiss.edu/resources/pdfs/usa193-selected-documents.pdf>; Christopher M. Petras, "Space Force Alpha: Military Use of the International Space Station and the Concept of "Peaceful Purposes", 53 F.L. REV. 135, 155 (2002).

<sup>17</sup> E.J. Opik & S.F. Singer, *Escape of Gases from the Moon*, 65(10) JOURNAL OF GEOPHYSICAL RESEARCH 3065, 3065 (October, 1960).

<sup>18</sup> *Compromis* §22; Clarifications, at 1.

<sup>19</sup> *infra* §3-4.

**2. UNDER THE PRINCIPLE OF EX AEQUO ET BONO, PEROVSK HAS THE RIGHT TO CONTINUE ITS ACTIVITIES ON THE MOON.**

9. The processing activity involves pulverizing the regolith to create metal powder for its peaceful use. Titan contends that this pulverization constitutes appropriation. Further, Titan contends that the pulverization is damaging the unused and non-functional *Novum Organum-1* site. Both the Parties, for this issue, have expressly submitted to Article 38(2) of the Statute of the ICJ,<sup>20</sup> which allows the ICJ to decide *ex aequo et bono*.<sup>21</sup> This permits the ICJ to rely on principles of equity as well as considerations beyond the law.<sup>22</sup>

10. Perovsk submits that *first*, its activities amount to use and do not constitute appropriation of outer space [A]; and *second*, Perovsk is not responsible for the despoliation of the *Novum Organum-1* site [B].

**A. PEROVSK’S ACTIVITIES AMOUNT TO USE AND DO NOT CONSTITUTE APPROPRIATION OF OUTER SPACE.**

11. The “exploration and use” of outer space is the “province of all mankind”.<sup>23</sup> This means that all States have equal freedom to use outer space.<sup>24</sup> The term “use” includes the possibility of exploitation. This broad interpretation of the term use may be seen in the UNGA Resolution 1348 (XIII) which laid the foundation for the OST and endorsed “exploration and exploitation”

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<sup>20</sup> *Compromis* §24.

<sup>21</sup> Article 38(2), Statute of the International Court of Justice (1945); *Indo-Pakistan Western Boundary (India v. Pakistan)*, 17 R.I.A.A. 1, 11 (1968).

<sup>22</sup> *infra* §15, 18 and 23.

<sup>23</sup> G.A. Res. 1962 (XVIII), U.N. GAOR, 18<sup>th</sup> Sess., U.N. Doc. A/RES/18/1962 (1963); G.A. Res. 2222 (XXI), U.N. GAOR, 21<sup>st</sup> Sess., U.N. Doc. A/RES/21/2222 (1966); Article I, OST.

<sup>24</sup> Stephan Hobe, *Outer Space as the Province of Mankind - An Assessment of 40 Years of Development*, 50<sup>th</sup> I.I.S.L PROC. 442, 444 (2007); G.A. Res. 1962, *id*.

of outer space.<sup>25</sup> The *travaux préparatoires* can be relied on to confirm the meaning of a word.<sup>26</sup> In the 5<sup>th</sup> Session of the Legal Subcommittee of the UNCOPUOS [hereinafter “LSC”] the French representative stated that the term “use” was “by no means exhaustive” and may include “exploitation”.<sup>27</sup> Perovsk’s regolith processing may be termed exploitation and would therefore amount to permissible use.<sup>28</sup>

**12.** The express restriction is on the appropriation of outer space.<sup>29</sup> Such prohibition is limited to any permanent claims of title or sovereignty over a territory in outer space.<sup>30</sup> It is not extended to the use of extracted resources from such territory.<sup>31</sup> Further, appropriation requires the intention to act as a Sovereign.<sup>32</sup> In the present case, Perovsk has neither staked any permanent claim to the lunar area as a Sovereign.

**13.** Additionally, natural resource utilization is recognized in outer space. ‘Natural resources’

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<sup>25</sup> G.A. Res. 1348 (XIII), GAOR, 13<sup>th</sup> Sess. U.N. Doc. A/RES/1348 (1958).

<sup>26</sup> Vienna Convention on the Law of Treaties, *entered into force* Jan. 27, 1980 Article 32, 1155 U.N.T.S., 331 [VCLT].

<sup>27</sup> Comm. on the Peaceful Uses of Outer Space, Legal Subcomm., Summ. Records of its 5<sup>th</sup> Sess., 63<sup>rd</sup> mtg., July 20, 1966, 5, U.N. Doc. A/AC.105/C.2/SR.63, 8 (20<sup>th</sup> July 1966).

<sup>28</sup> Stephen Hobe, *Article I*, I COLOGNE COMMENTARY 30; CARL Q. CHRISTOL, *THE MODERN INTERNATIONAL LAW OF OUTER SPACE* 40 (1982); E.G. Vassilievskaja, *Notions of ‘exploration’ and ‘use’ of natural resources of celestial bodies*, 20 I.I.S.L PROC. 476 (1977); K.H. Böckstiegel, *Legal implications of commercial space activities*, 24 I.I.S.L PROC. 26 (1981); CARL Q. CHRISTOL, *THE MODERN INTERNATIONAL LAW OF OUTER SPACE* 40 (1982).

<sup>29</sup> Article II, OST.

<sup>30</sup> C.W. Jenks, *Property in Moon Samples and things left upon the moon*, 12<sup>th</sup> I.I.S.L PROC 148 (1969); S.M. Williams, *The law of Outer Space and natural resources*, 36 INT.& COMPARATIVE LAW QUARTERLY 146 (1986); GA, Comm. on Disarmament and Intl. Sec., 21<sup>st</sup> Sess., 428, U.N. A/C.1.PV.1492 (December 17, 1966) (statement by the Ambassador of USA, in referring to Article II he circumscribed its limits to “claims of territorial sovereignty.”).

<sup>31</sup> Cestmir Cepelka & Jamie Gilmour, *The Application of General International law in outer space*, 36 J. AIR & COM. 32 (1970); Comm. on the Peaceful Uses of Outer Space, Legal Subcomm., Rep. on its 56<sup>th</sup> Sess., 33, U.N. Doc. A/AC.105/1122 (April 18, 2017) (§246, “...extraction of resources from the Moon or a celestial body was a use within the meaning of and permitted by article I of the Outer Space Treaty...”); STEPHEN GOROVE, *STUDIES IN SPACE LAW: ITS CHALLENGES AND PROSPECTS* 82-84 (1977); C.W. JENKS, *SPACE LAW* 275 (1965).

<sup>32</sup> Rep. on its 56<sup>th</sup> Sess., *id.* at 31, §239.



are defined not by their physical characteristics but their “potential economic value”.<sup>33</sup> Like ilmenite, the Geostationary Orbit [hereinafter, “GSO”] has been considered to be a limited natural resource with economic value.<sup>34</sup> The restriction on appropriation does not distinguish between “celestial bodies” and “outer space”.<sup>35</sup> Therefore, the principles applicable to GSO are transferable to ilmenite. The exploitation of GSO is permitted,<sup>36</sup> and widespread.<sup>37</sup> Since States’ satellites are allowed to occupy and use the GSO, States must similarly be allowed to use the lunar resources.<sup>38</sup> Therefore, Perovsk’s activities amount to permissible use and not appropriation.

**14.** Titan may argue that, *de lege lata*, there is no regime governing the use of resources derived from outer space. In such cases, *ex aequo et bono* entitles the ICJ to use any appropriate equitable measures, procedure, principle or method without inhibitions.<sup>39</sup> Accordingly, the ICJ

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<sup>33</sup> *Natural resources*, BLACK’S LAW DICTIONARY, (9<sup>th</sup> edn., 2009).

<sup>34</sup> Constitution of the International Telecommunications Union, *entered into force* July 1, 1994, ATS (1994) 28, BTS 24 (1996) Article 44 [ITU Constitution].

<sup>35</sup> Comm. on the Peaceful Uses of Outer Space, Legal Subcomm., Rep. on its 56<sup>th</sup> Sess., 13, U.N. Doc. A/AC.105/1045 (April 23, 2013); Comm. on the Peaceful Uses of Outer Space, Legal Subcomm., Summ. Records, 5<sup>th</sup> Sess., 16, U.N. Doc. A/AC.105/C.2/SR.57 (October 20, 1966) (statement by the French representative).

<sup>36</sup> Article 44, ITU Constitution.

<sup>37</sup> ITU, *Space Network List: List of geostationary satellites in non-planned services*, [goo.gl/OmAKLA](http://goo.gl/OmAKLA); ITU, *Space Network List: List of geostationary satellites in planned services*, <https://goo.gl/LKoXso>.

<sup>38</sup> Phillip De Man, *The Commercial Exploitation of Outer Space and Celestial Bodies – A Functional Solution to the Natural Resource Challenge*, NEW PERSPECTIVES ON SPACE LAW: 53 I.I.S.L PROC., 56 (Mark J. Sundahl & V. Gopalakrishnan eds., 2011).

<sup>39</sup> Maritime Delimitation (Denmark v. Norway) (Merits), 1993 I.C.J. (Jun. 14) (separate opinion by Weeramantry, J.) §55; THOMAS M. FRANCK, FAIRNESS IN INTERNATIONAL LAW AND INSTITUTIONS, 53 (1998); Leon Trackman, *Ex Aequo et Bono: Demystifying an Ancient Concept*, 8(2) CHICAGO JOURNAL OF INTERNATIONAL LAW, 621 (2008); *Ex aequo et bono*, BLACK’S LAW DICTIONARY 500 (5<sup>th</sup> ed., 1979); Maritime Delimitation (Denmark v. Norway) (Merits), 1993 I.C.J. (Jun. 14) (separate opinion by Weeramantry, J.) §55; Alain Pellet, *Article 38* in THE STATUTE OF THE INTERNATIONAL COURT OF JUSTICE: A COMMENTARY, 703 (A. Zimmerman *et al*, eds., 2012).

may consider practical<sup>40</sup> and political<sup>41</sup> requirements, as well as rely on analogies drawn from other legal regimes or principles to fill gaps in the law.<sup>42</sup>

15. The right to enjoy usufructs is one such principle. It is embodied in, both, civil and common law jurisdictions.<sup>43</sup> This is the right to use the fruits of a property without claiming a title to it. This right has been extended to other *res communis* regimes such as the high-seas<sup>44</sup> which, like outer space, possess a non-appropriative character.<sup>45</sup> The law of the sea only requires the exploiting State to not exclude other States from doing the same.<sup>46</sup> The use of outer space is the “province of all mankind”,<sup>47</sup> and must be on the basis of “equality”.<sup>48</sup> Thus, an analogy with the law of the sea is considered by States to mirror the underlying freedom of the outer space.<sup>49</sup> Therefore, the exploitation of natural resources “merely forms part of the freedom of exploration

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<sup>40</sup> Stephen Hall, *The Persistent Spectre: Natural Law, International Law and the Limits of Legal Positivism*, 12 EUROPEAN J INTL L. 261, 278-81 (2001).

<sup>41</sup> H. LAUTERPACHT, THE FUNCTION OF LAW IN THE INTERNATIONAL COMMUNITY 379 (1933).

<sup>42</sup> O. Schachter, *International Law in Theory and Practice*, in 178 RECUEIL DES COURS 85-86 (1982); North Sea Continental Shelf Case (Germany v. Netherlands) (Merits), 1969 I.C.J. (Feb. 20) (separate opinion by Ammoun, J.) §39.

<sup>43</sup> H. JOLOWICZ & B. NICHOLAS, HISTORICAL INTRODUCTION TO THE STUDY OF ROMAN LAW 296 (3<sup>rd</sup> edn., 1972); WILLIAM HOLDSWORTH, HISTORICAL INTRODUCTIONS TO THE ENGLISH LAND LAW 90 (1934); A. N. Yiannopoulos, *Usufruct: General Principles - Louisiana and Comparative Law*, 27 LA. L. REV. (1967).

<sup>44</sup> JOHN SPRANKLING, INTERNATIONAL PROPERTY LAW 34-35 (2014).

<sup>45</sup> Article 137, UN Convention of the Law of the Sea [1994] ATS 31/21 ILM 1261 (1982) [UNCLOS].

<sup>46</sup> FABIO TRONCHETTI, THE EXPLOITATION OF NATURAL RESOURCES OF THE MOON AND OTHER CELESTIAL BODIES 221 (2009); Article 116, UNCLOS.

<sup>47</sup> Article I, OST; G.A. Res. 1962, *supra* note 23.

<sup>48</sup> G.A. Res. 1962, *supra* note 23.

<sup>49</sup> Comm. on the Peaceful Uses of Outer Space, Legal Subcomm., Summ. Record, 3<sup>rd</sup> Sess., 31<sup>st</sup> Meeting, 19, U.N. Doc. A/AC.105/C.2/SR.31 (August 24, 1964) (statement by the representative of Romania); GA, Comm. on Disarmament and Intl. Sec., 15<sup>th</sup> Sess., 7, U.N. Doc. A/C.1/PV.1210 (December 4, 1961) (statement by the representative of USA, “Man should be free to venture into space on the same basis that he has ventured on the high seas”); D. Goedhuis, *Some Recent Trends in the Interpretation and Implementation of the Rules of International Space Law*, 19 COLUM. J. TRANSNAT'L L. 219 (1981); Comm. on the Peaceful Uses of Outer Space, Scientific and Technical Subcomm., 39<sup>th</sup> Sess., U.N. Doc. A/AC.105/C.1/L.256/Rev.1 (2002).

and use, and is not prohibited”,<sup>50</sup> as long as no permanent claims of sovereignty to the area are made and States do not prevent other States from doing the same.<sup>51</sup>

16. In the present case, Perovsk has not laid claim to ownership over the lunar territory. It is merely exercising its rights to enjoy the usufructs. Therefore, Perovsk’s activities are lawful and it must not be compelled to cease its operations.<sup>52</sup>

17. Additionally, *ex aequo et bono* allows treaty interpretation to be “in accordance with justice and political requirements”.<sup>53</sup> In this context, a broad and liberal reading of the first clause of Article I, OST should be employed. Accordingly, the establishment of a “launch site and refueling station”,<sup>54</sup> would expand the bounds of space exploration and use and is thus in the “common interest of mankind”,<sup>55</sup> and “general interest of all countries”.<sup>56</sup>

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<sup>50</sup> Bin Cheng, *Le Traité de 1967 sur l'espace*, 95 (No.3) JOURNAL DU DROIT INTERNATIONAL 574 (1969).

<sup>51</sup> C.W. JENKS, *SPACE LAW* 275 (1965); STEPHEN GOROVE, *STUDIES IN SPACE LAW: ITS CHALLENGES AND PROSPECTS* 82-84 (1977); TRONCHETTI, *supra* note 43, at 221; Böckstiegal, *supra* note 28, at 24; General Assembly, Comm. on Disarmament and Intl. Sec., 21<sup>st</sup> Sess., 2, U.N. Doc. A/C.1/PV.1210 (January 27, 1967) (statement by the representative of USA “the exploration and use is the right of all States on the basis of equality”); Bin Cheng, *The Legal Regime of Airspace and Outer Space: The Boundary Problem, Functionalism vs. Spatialism*, 5 ANNALS OF AIR AND SPACE LAW 323, 332(1980); FRANCIS LYALL & PAUL LARSEN, *SPACE LAW: A TREATISE* 193 (2013); Comm. on the Peaceful Uses of Outer Space, Legal Subcomm., Summ. Record, 8<sup>th</sup> Sess., 45<sup>th</sup> Meeting, 19, U.N. Doc. A/AC.105/PV.45 (September 19, 1966) (statement by the representative of Romania)

<sup>52</sup> International Law Commission, *Articles on State Responsibility*, GAOR, 56<sup>th</sup> Sess. Supp. No. 10, Article 30, U.N. Doc. A/56/10 (2001) [Articles on State Responsibility].

<sup>53</sup> H. LAUTERPACHT, *supra* note 41.

<sup>54</sup> *Compromis* §14.

<sup>55</sup> G.A. Res. 71/90, GAOR, 71<sup>st</sup> Sess. U.N. Doc. A/RES/71/90 (2016); General Assembly, Comm. on Disarmament and Intl. Sec., Summ. Record, 21<sup>st</sup> Sess., 58-59, U.N. Doc. A/ PV.1499 (December 19, 1966) (statement by the representative of Italy, “Finally, this Treaty has one exploitation only as its aim, that of giving mankind all the possible benefits that can derive from the opening of a new immense frontier.”).

<sup>56</sup> Rep. on its 56<sup>th</sup> Sess., *supra* note 31 at 33 (§242, “...such activities should be considered for the benefit and in the general interest of all countries because of the technological progress and scientific advancements flowing from such activities.”).

**B. PEROVSK IS NOT RESPONSIBLE FOR THE DESPOLIATION OF THE *NOVUM ORGANUM-1* SITE.**

18. Titan has prayed for the cessation of Perovsk’s activities because these activities have led to despoliation of the non-functional *Novum Organum-1* site. Perovsk submits that *first*, claims in perpetuity on the Moon are prohibited [I]; and *second*, non-material interests are not protected under space law [II].

**I. Claims in perpetuity on the Moon are prohibited.**

19. Titan’s interest in the preservation of *Novum Organum-1* site amounts to appropriation.<sup>57</sup> Admittedly, there exists a distinction between occupancy and appropriation.<sup>58</sup> The two are differentiated by the intent of the occupying party.<sup>59</sup> Space law does not prohibit temporary occupancy but prohibits claims in perpetuity because they amount to appropriation.<sup>60</sup> Occupancy stretches only till the space object is functional.<sup>61</sup> Claims over the territory occupied by a space object after the loss in functionality amount to a claim in perpetuity.<sup>62</sup> Even in the GSO, States are required to de-orbit any satellite which has reached its end of life.<sup>63</sup>

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<sup>57</sup> Article II, OST.

<sup>58</sup> Brendan Cohen, *Use versus Appropriation of Outer Space: The Case for Long Term Occupancy Rights*, 57 I.I.S.L PROC. 35, 36 (2014).

<sup>59</sup> Cepelka, *supra* note 31, at 33.

<sup>60</sup> Stephen Gorove, *The 1980 Session of The U.N. Committee on The Peaceful Uses Of Outer Space: Highlights Of Positions On Outstanding Legal Issues*, 8 JOURNAL OF SPACE LAW 182 (1980) citing the Columbian representative, “the fact that there might be an allocation of satellite orbits in perpetuity was at variance with international law”.

<sup>61</sup> Cohen, *supra* note 58, at 40.

<sup>62</sup> René Mankiewicz, *Interventions with Respect to Permanent Stations on the Moon*, 11 I.I.S.L PROC., 163, 163 (1968).

<sup>63</sup> G.A. Res. 60/99, GAOR, 60<sup>th</sup> Sess. U.N. Doc. A/RES/60/99 (2005); UNCOPUOS, *Compendium Space Debris Mitigation Standards Adopted by States and International Organisations*, [http://www.unoosa.org/documents/pdf/spacelaw/sd/Space\\_Debris\\_Compendium\\_COPUOS\\_10\\_January\\_2017.pdf](http://www.unoosa.org/documents/pdf/spacelaw/sd/Space_Debris_Compendium_COPUOS_10_January_2017.pdf) (2017).

20. In the present case, the equipment of the *Novum Organum-1* has reached the end of its functionality.<sup>64</sup> Thus, Titan's interest in the exploration site would amount to *de facto* appropriation due to its claim in perpetuity over the tracts of the lunar territory.<sup>65</sup>

## II. Non-material interests are not protected under space law.

21. Titan may claim that the *Novum Organum-1* site is their cultural heritage and seek its preservation. However, States cannot claim exploration sites, in outer space, to be cultural heritage since such claims are tied to territoriality.<sup>66</sup> This territoriality would violate the freedom of exploration and "access to all areas" of other States,<sup>67</sup> as well as the principle of non-appropriation,<sup>68</sup> and interfere with activities of other States.<sup>69</sup> Lastly, States cannot extend cultural property rights to outer space since cultural property implies a "duty to pass them on to successors".<sup>70</sup> However, this very concept of "heritage" which gives a patrilineal right to outer space was rejected by space faring nations by not signing the Moon Agreement.<sup>71</sup>

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<sup>64</sup> *Compromis* §2 and 21.

<sup>65</sup> Clarification, at 20; Stephen Gorove, *Interpreting Article II of the Outer Space Treaty*, 37(3) *FORDHAM L. REV.* 349, 352 (1999).

<sup>66</sup> Convention Concerning the Protection of the World Cultural and Natural Heritage, 16 November 1972, 1037 UNTS 151; UNIDROIT Convention On Stolen or Illegally Exported Cultural Objects, 24 June 1995, 34 ILM 1322.

<sup>67</sup> Article I, OST; Comm. on the Peaceful Uses of Outer Space, Legal Subcomm., Summ. Record, 5<sup>th</sup> Sess., 7, U.N. Doc. A/AC.105/C.2/SR.57 (October 24, 1966) (statement by the representative of USA confirms that there exists an "explicit guarantee of open access to all areas of celestial bodies, a provision which flowed naturally and logically from prohibition of claims to territorial claims.").

<sup>68</sup> Article II, OST.

<sup>69</sup> Article IX, OST.

<sup>70</sup> Lyndel Prott & Patrick O'Keefe, 'Cultural Heritage' or 'Cultural Property'?, 1 *INT'L J OF CULTURAL PROP* 307, 311 (1992); Janet Blake, *On Defining the Cultural Heritage* 49 *ICLQ* 61, 69 (2000).

<sup>71</sup> Comm. on the Peaceful Uses of Outer Space, Legal Subcomm., Rep. on its 12<sup>th</sup> Sess., (April 27, 1973) U.N. Doc. A/AC.105/115; KEMAL BALSAR, *THE CONCEPT OF THE COMMON HERITAGE OF MANKIND* 125-127 (1998); *International Space Activities, 1979: Hearings Before the Subcomm. on Space Science & Applications of the H. Comm. on Science & Technology*, 96th

**22.** Even if Titan’s interest is recognized as legitimate under law, *ex aequo et bono* allows the ICJ to consider factors beyond the law.<sup>72</sup> In the present case, the ICJ must consider the non-functionality of the *Novum Organum-1* site. Perovsk’s right to use the Moon for its lawful purposes should not be hampered by the presence of non-functional debris. Even within the law, the Liability Convention does not provide compensation for damages of a non-material character.<sup>73</sup> In space, the damage must impair the functionality of the object or destroy it.<sup>74</sup> All interests held by Titan in the preservation of the *Novum Organum-1* site are non-material in nature.<sup>75</sup> Thus, Perovsk material interests must be given precedence.

**23.** Moreover, the protection of material interests in outer space over non-material interests would serve to promote space-faring and the use of space resources. A majority of developing countries are on the verge of developing space-faring capabilities.<sup>76</sup> Their interests in exploration and exploitation would be severely compromised if the non-material interests of other nations were given precedence over their existing material interests. Therefore, Perovsk must not be compelled to cease its activities.

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Cong., 219 (1979) (statement by Alexander Haig, ratification “would doom any private investment directed at space resource exploration.”).

<sup>72</sup> Trackman, *supra* note 37, at 636; Pellet, *supra* note 39, at 793.

<sup>73</sup> Carl Q. Christol, *International Liability for the Damage Caused by Space Objects*, AM .J. INT’L LAW 368 (1980); VALERIE KAYSER, LAUNCHING OBJECTS: ISSUES OF LIABILITY AND FUTURE PROSPECTS 44 (2001).

<sup>74</sup> KAYSER, *id.* at 43.

<sup>75</sup> *Compromis* §2 and 21.

<sup>76</sup> Francis Lyall, *Small States and Space*, 49<sup>th</sup> I.I.S.L PROC. (2006).

**3. TITAN VIOLATED INTERNATIONAL LAW BY FAILING TO DISCLOSE ITS DISCOVERIES ON THE MOON.**

24. Titan discovered ilmenite on the Moon and failed to disclose it to the international community.<sup>77</sup> States are obligated to disclose information regarding their space activities to the greatest extent feasible and practicable.<sup>78</sup> Titan's failure to disclose constitutes a breach of its obligations.

25. Perovsk submits *first*, the available circumstantial evidence serves as sufficient proof for the alleged act [A]; *second*, the ICJ can adjudicate on the non-fulfilment of the disclosure norms [B]; *third*, disclosure norms are subject to good-faith obligations, which were not fulfilled by Titan [C].

**A. THE AVAILABLE CIRCUMSTANTIAL EVIDENCE SERVES AS SUFFICIENT PROOF OF TITAN'S DISCOVERY OF ILMENITE.**

26. The ICJ's approach to the admissibility of evidence has been flexible.<sup>79</sup> This is supported by the substantial weight given to circumstantial evidence in the *Corfu Channel* case,<sup>80</sup> wherein the parties were allowed to take "liberal recourse to inferences of fact and circumstantial evidence".<sup>81</sup> Perovsk submits that *first*, in the present case, the ICJ may give reasonable weight to circumstantial evidence [I]; and *second*, the circumstantial evidence is sufficient to prove the discovery of minerals by Titan [II].

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<sup>77</sup> *Compromis* §11.

<sup>78</sup> Article XI, OST.

<sup>79</sup> MICHAEL P. SCHARF & MARGAUX DAY, RECONCILABLE DIFFERENCE: A CRITICAL ASSESSMENT OF THE INTERNATIONAL COURT OF JUSTICE'S TREATMENT OF CIRCUMSTANTIAL EVIDENCE, 2 (2010), [http://works.bepress.com/michael\\_scharf/2](http://works.bepress.com/michael_scharf/2).

<sup>80</sup> *Corfu Channel* (United Kingdom v. Albania) (Merits) 1949 I.C.J. 4 (Apr. 9) [Corfu].

<sup>81</sup> *Corfu, id.*, at 18.

**I. In the present case, the ICJ may give reasonable weight to circumstantial evidence.**

27. In the *Corfu Channel* case, the ICJ allowed the parties to resort to circumstantial evidence if two conditions were met.<sup>82</sup> *First*, the direct evidence must be within the exclusive control of the opposite party and *second*, the circumstantial evidence must not contradict known facts.

28. Titan has the sole control over any direct evidence of the activities of the rover. Further, none of the circumstantial evidence provided below,<sup>83</sup> contradict the *Compromis*. Moreover, Titan has failed to furnish any direct evidence contradicting the evidence provided by Perovsk.

**II. The circumstantial evidence sufficiently proves the alleged discovery of minerals by Titan.**

29. The ICJ permits liberal inferences from circumstantial evidence, when the direct evidence is in the control of the other party.<sup>84</sup> The ICJ allowed any proof from such inferences in the *Corfu Channel* case only if they left no room for “reasonable doubt”.<sup>85</sup>

30. However, Perovsk submits that the ICJ must set a lower standard of proof for establishing the present allegation, and subsequent State responsibility. ICJ’s evidentiary practices, including that of the desirable standard of proof in a given case, are flexible and vary in accordance with the needs and gravity of the dispute and the allegations made.<sup>86</sup>

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<sup>82</sup> Scharf, *supra* note 79, at 6.

<sup>83</sup> *infra* §31-36.

<sup>84</sup> *Corfu*, *supra* note 80, at 18.

<sup>85</sup> *Corfu*, *supra* note 80, at 18.

<sup>86</sup> James A. Green, *Fluctuating Evidentiary Standards for Self-Defence in the International Court of Justice*, INTERNATIONAL AND COMPARATIVE LAW QUARTERLY; Carl Q. Christol, *International Liability for the Damage Caused by Space Objects*, 58(1) AM .J. INT’L LAW 163, 166 (2009); Charles N. Brower, *Evidence Before International Tribunals: The Need for Some*



**31.** The high “beyond reasonable doubt” standard, laid down for a dispute regarding compensation for loss of life and property caused due to minefields in Albania’s territorial waters, is not appropriate for the present issue of non-disclosure of discoveries. Further, the ICJ, in the *Crime of Genocide* case, has also stated that any inference about a State’s intent must be “convincingly shown”.<sup>87</sup> However, this evidentiary standard must also be restricted to the imputation of intent on a State for grave crimes like genocide.

**32.** In light of that, regard must further be had to the less grave nature of the present allegation and the particularly volatile conditions that operate in outer space. These conditions reduce the likelihood of collection and survival of sufficient evidence to satisfy a high standard of proof. Thus, mandating a high standard would “render the proof unduly exacting.”<sup>88</sup> Therefore, Perovsk submits that the lower standard of “preponderance of probabilities”, that has been utilized in international law in multiple disputes,<sup>89</sup> is appropriate in the present case.

**33.** In 2021, Titan was under significant pressure to find lunar samples. Consequently, Titan launched a rover capable of collecting and analysing lunar samples.<sup>90</sup> The rover’s distinctive tread pattern was found near *multiple* ilmenite deposits.<sup>91</sup> These factors taken together, upon a balance of probabilities, point to Titan’s discovery of ilmenite. Further, it must be noted that

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*Standard Rules*, 28(1) THE INTERNATIONAL LAWYER 47, 48 (1994); CHITTHARANJAN F. AMERASINGHE, EVIDENCE IN INTERNATIONAL LITIGATION, 232 (2005).

<sup>87</sup> Bosnian Genocide (Bosnia and Herzegovina v. Serbia and Montenegro), ICJ Reports (2007) §373.

<sup>88</sup> Norwegian Loans (France v. Norway) (Merits), I.C.J. Reports (1957) (July 6) (separate opinion by Lauterpracht, J.) 39-40; Kenneth P. Yeager (Yeager v. Iran), 17 Iran U.S. CTR, 108 (1987).

<sup>89</sup> Combustion Engineering (Combustion Engineering Inc. v. Iran), 26 Iran U.S. CTR, 79-80 (1991); Schering Corporation (Schering Corp. v. Iran), 5 Iran U.S. CTR, 178 (dissenting opinion by Mosk, J.) (1984); Sea Land Service (Sea Land Service Inc. v. Iran), 6 Iran U.S. CTR, 178 (dissenting opinion by Holtzmann, J.) (1984).

<sup>90</sup> *Compromis* §9.

<sup>91</sup> *Compromis* §11.

Titan has failed to produce any records of the activities of the rover. This is evidence that can be reasonably expected to exist, and be in the exclusive control of Titan. This must lead the ICJ into forming a further inference adverse to Titan, regarding the assessment of the evidence adduced in the dispute.<sup>92</sup>

**34.** Therefore, the circumstantial evidence, when seen in its entirety and in combination with the non-production of evidence by Titan, sufficiently proves that the alleged discoveries were made by the Titanite rover.

**B. THE ICJ CAN ADJUDICATE ON THE NON-FULFILMENT OF DISCLOSURE NORMS.**

**35.** Titan may argue that the disclosure norms are self-judging, and are thus not subject to adjudication by the ICJ. However, Perovsk submits that in the absence of any phrase conferring absolute discretion on the Sovereign in Article XI,<sup>93</sup> performance by the ICJ. The assessment is, thus, not merely a function of the subjective judgment of the States.<sup>94</sup>

**36.** The *travaux préparatoires* confirm this proposition. Disclosure norms serve two broad purposes - ensuring demilitarization and dissemination of scientific findings.<sup>95</sup> The US representative pointed out that making the obligation completely voluntary will defeat the

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<sup>92</sup> Fritz (J. Fritz & Co. v. Sherkate Tavonie), 22 Iran U.S. CTR, 189-190 (dissenting opinion by Allison, J.) (1989); Protiva (Protiva v. Iran), 31 Iran U.S. CTR, 110-115 (1995); Birnbaum (H. Birnbaum v. Iran), 29 Iran U.S. CTR, 280 (1993); Marvin Feldman v. United Mexican States, ICSID Case No. ARB(AF)/99/1, at 625 (2003); McCurdy (United States v. Mexico), 1929 Opinions of Commissioners, 141; Pomeroy's El Paso Transfer Co. Case (United States v. Mexico), 1931 Opinions of Commissioners, 6.

<sup>93</sup> Article XI, OST.

<sup>94</sup> Oil Platforms (Iran v. United States) (Merits) 2003 I.C.J. 161, 183 (Nov. 6); Military and Paramilitary Activities in and against Nicaragua (Nicaragua v. United States) (Merits) 1986 I.C.J. 14, 141 (June 27).

<sup>95</sup> Comm. on the Peaceful Uses of Outer Space, Legal Subcomm., Rep. on its 5<sup>th</sup> Sess., 65<sup>th</sup> mtg., July 22, 1966, 5, U.N. Doc. A/AC.105/C.2/SR.65 (October 24, 1966); Comm. on the Peaceful Uses of Outer Space, Legal Subcomm., Rep. on its 5<sup>th</sup> Sess., 70<sup>th</sup> mtg., August 3, 1966, 3, U.N. Doc. A/AC.105/C.2/SR.70 (October 21, 1966).

purposes of the provision and the idea of “common province of mankind” laid down in the OST.<sup>96</sup> The LSC accepted this proposition.

37. Further, in the absence of any mechanism to review the performance of Article XI, the first purpose of ensuring the observance of demilitarization of outer space<sup>97</sup> would remain unfulfilled.<sup>98</sup> Therefore, interpreting the provision in line with its ordinary meaning and in light of its object and purpose,<sup>99</sup> the ICJ has the power to adjudicate on the non-fulfilment of disclosure norms.

**C. DISCLOSURE NORMS ARE SUBJECT TO GOOD FAITH OBLIGATIONS, WHICH ARE NOT FULFILLED BY TITAN**

38. Titan’s performance of Article XI is reviewable on the grounds of good faith.<sup>100</sup> A performance, in good faith, must be consistent with the object and purpose of the treaty. Article I, OST sets up a normative framework and is a clear codification of the object of the treaty.<sup>101</sup> Article I prescribes that outer space is free to use by all member States without discrimination.<sup>102</sup> Therefore, any non-disclosure by a sovereign, under Article XI for the purposes of disallowing or discriminating against a particular sovereign from freely utilizing outer space is a breach of good faith.

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<sup>96</sup> Rep. on its 5<sup>th</sup> Sess., *supra* note 88; Comm. on the Peaceful Uses of Outer Space, Legal Subcomm., Rep. on its 5<sup>th</sup> Sess., 64<sup>th</sup> mtg., July 21, 1966, 11, U.N. Doc. A/AC.105/C.2/SR.64 (October 24, 1966); Article I, OST; Ksenia Shestakova, *The Dichotomy Between the Duty to Provide Information and Security Concerns of a State* 55<sup>th</sup> I.I.S.L PROC. (2012).

<sup>97</sup> Article IV, OST.

<sup>98</sup> BIN CHENG, *STUDIES IN INTERNATIONAL SPACE LAW*, 253 (1997).

<sup>99</sup> Article 31(1), VCLT.

<sup>100</sup> Article 26, VCLT; Stephen Schill & Robyn Briese, “*If the state considers*”: *Self-judging clauses in International dispute settlement*, 13 MAX PLANCK YEARBOOK OF UNITED NATIONS LAW, 61-140 (2009).

<sup>101</sup> Stephen Hobe, *Article I*, I COLOGNE COMMENTARY 10-12.

<sup>102</sup> Article I, OST.

39. In the present case, statements by Titan’s officials,<sup>103</sup> and the political discourse in Titan,<sup>104</sup> clearly indicate that Titan’s non-disclosure of ilmenite is targeted towards preventing Perovsk from exercising its legal right of lunar resource exploitation.<sup>105</sup> Therefore, Titan’s non-disclosure is discriminatory and violates the freedom envisaged under Article I of the OST. Hence, Titan has breached its international obligation of performing the OST in good faith.

40. At the minimum, Titan was required to furnish reasons in good faith for the non-fulfilment of its obligation and to show that the reasons fell under the exceptions allowed under the disclosure norms.<sup>106</sup> In the immediate instance, no responsible authority from Titan issued any official statement providing any reasons for the non-disclosure. Thus, Titan has violated International law by failing to disclose its discoveries.

#### **4. TITAN IS LIABLE FOR THE DAMAGE TO THE PROCESSING STATION.**

41. In February 2027, a rover operated by Titan was sent from *Mondiale* for the purpose of an inspection. The rover collided with the processing station.<sup>107</sup> Perovsk submits that *first*, this collision is within the scope of the Liability Convention [A]; *second*, Titan is liable under Article III of Liability Convention [B]; and *third*, alternatively, Titan is liable under general International law [C].

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<sup>103</sup> *Compromis* §12

<sup>104</sup> *Compromis* §12

<sup>105</sup> *infra* §12-18.

<sup>106</sup> Certain Questions of Criminal Assistance in Criminal Matters (Djibouti v. France) (Merits) 2008 I.C.J. 177, 229 (June 4).

<sup>107</sup> *Compromis* §19.

**A. THE COLLISION IS WITHIN THE SCOPE OF THE LIABILITY CONVENTION.**

42. Perovsk submits that Titan is liable for the damage to the processing station because *first*, it is the launching State of the rover [I]; *second*, claims between co-launching States are allowed under the Liability Convention [II]; and *third*, Article III is applicable to the collision [III].

**I. Titan is a launching State of the rover.**

43. A “Launching State” includes a State party responsible for “procuring the launch” of the space object.<sup>108</sup> The State which procures a launch is one which requests the launch or is directly responsible for it.<sup>109</sup> The launch of the damage-causing rover was carried out at the request of Titan.<sup>110</sup> Thus, Titan is the launching State of the rover.

**II. Claims between co-launching states are allowed under the Liability Convention.**

44. The rover that caused damage to the processing station was launched from Perovsk’s *La Mancha* spaceport, on a Perovsk-operated rocket.<sup>111</sup> Therefore, Perovsk is a co-launching State of the rover.<sup>112</sup> Perovsk submits that its status as a co-launching State does not prejudice its claim under the Liability Convention.

45. Any interpretation of an International convention must not defeat its underlying purpose.<sup>113</sup> The Liability Convention is “victim-oriented” in nature and must be interpreted as

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<sup>108</sup> Convention on International Liability for Damage Caused by Space Objects, *entered into force* Oct. 9, 1973, 24 U.S.T. 2389, Art 1(c) 961 U.N.T.S. 187 [Liability Convention]; Armel Kerrest, *Remarks on the Notion of a Launching State*, 42 I.I.S.L PROC. 308 (1999).

<sup>109</sup> K.H. Böckstiegel, *The Term Launching State” in International Law*, 37 I.I.S.L PROC. 80, 81 (1994); William B. Wirin, *Practical Implications of Appropriate State-Launching State Definitions*, 37 I.I.S.L PROC. 109 (1994).

<sup>110</sup> *Compromis* §9.

<sup>111</sup> *Compromis* §9.

<sup>112</sup> Article I(c), Liability Convention.

<sup>113</sup> ULF LINDERFALK, ON THE INTERPRETATION OF TREATIES, 203 (2007) [LINDERFALK].

such.<sup>114</sup> Article VII only expresses a bar on nationals of a launching State claiming from that *particular* launching State.<sup>115</sup> Therefore, claims against other co-launching States are allowed.

**46.** Moreover, the Liability Convention only calls for joint liability when multiple States “jointly launch a space object”.<sup>116</sup> This provision must be interpreted ordinarily to refer only to damage arising during the process of the launching of the space object.<sup>117</sup> When the launching is complete and the space object is in outer space, the launching State is liable only if the damage is due to its “fault”.<sup>118</sup> Thus, joint liability in outer space can only arise when multiple co-launching States are at fault. Only a State which exercises jurisdiction and control over the space object can be responsible for fault.<sup>119</sup>

**47.** In the present case, Titan, the ‘operator State’<sup>120</sup> and the ‘State of registry’<sup>121</sup> exercises sole jurisdiction over the space object.<sup>122</sup> Hence, Perovsk cannot be at fault for the operation of the rover and is not liable as a co-launching State. Therefore, its claim is admissible under the Liability Convention.

**48.** Further, holding all launching States jointly liable for damage in outer space, irrespective of fault, would be inequitable as it would impose liability on one launching State due to the fault

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<sup>114</sup> CHRISTOL *supra* note 28, at 211; CHENG, *supra* note 98, at 314.

<sup>115</sup> Article VII, Liability Convention; CHENG *supra* note 98, at 308.

<sup>116</sup> Article V(1), Liability Convention.

<sup>117</sup> Motoko Uchitomi, *State Responsibility/Liability for “National” Space Activities*, 44<sup>th</sup> I.I.S.L. PROC. 51 (2001); Article 31(1), VCLT; LINDERFALK, *supra* note 113, at 203.

<sup>118</sup> Article III, Liability Convention.

<sup>119</sup> Article 2, Articles on State Responsibility.

<sup>120</sup> *Compromis* §11.

<sup>121</sup> Clarification, at 18.

<sup>122</sup> *Compromis* §11.

of another.<sup>123</sup> This would also imply that a launching State can be held absolutely liable *even* in outer space. Such a conclusion would frustrate the “fault” liability regime set up by Article III.<sup>124</sup>

49. Additionally, such a declaration would be detrimental to space-faring. The boom in third-party launch service providers,<sup>125</sup> would be affected since they would be liable for any damage caused due to the object, irrespective of fault. This would be disproportionately harsh on the developing States, which form the majority of such providers.<sup>126</sup>

50. Therefore, Perovsk’s status as a co-launching State of the rover does not prejudice its claim for damage in the present dispute, under the Liability Convention.

### III. Article III of the Liability Collision is applicable to the collision.

51. Titan might argue that the collision is out of the scope of Article III since the damaged processing station was never launched, thus disqualifying Perovsk from claiming damages as a ‘launching State’. However, such an interpretation is narrow, and must be discarded.

52. All international instruments must be interpreted in an evolutive manner.<sup>127</sup> The evolutive interpretation of treaties recognizes that the application of legal instruments must evolve with time, lest they lose relevance.<sup>128</sup> The common intention of parties must be upheld in all

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<sup>123</sup> Ricky J. Lee, *Liability arising from Article VI of the Outer Space Treaty*, 48<sup>th</sup> I.I.S.L PROC. (2005).

<sup>124</sup> Article III, Liability Convention.

<sup>125</sup> ROBERT C. HARDING, *SPACE POLICY IN DEVELOPING COUNTRIES*, 73 (2012).

<sup>126</sup> Lyall, *supra* note 76; Ajay Lele, *India and the satellite launch market*, INSTITUTE OF DEFENSE STUDIES AND ANALYSIS (2015).

<sup>127</sup> EIRIC BJØRGE, *THE EVOLUTIONARY INTERPRETATION OF TREATIES* 60 (2014).

<sup>128</sup> Dispute regarding Navigational and Related Rights (Costa Rica v. Nicaragua), 2009 I.C.J. 213 (July 13).

evolutive interpretation of treaties.<sup>129</sup> In this scenario, disqualifying Perovsk from claiming would be contrary to the intention of the parties at the time of drafting.

**53.** In the 7<sup>th</sup> session of the LSC, the phrase “space object of a launching State” was added in order to ensure a link of traceability to facilitate claims.<sup>130</sup> Further, since there could be multiple launching States, the addition of the phrase was to ensure that any State which could possibly be affected by the damage to a space object had the opportunity of compensation. Therefore, the common intention of the parties was to broaden the scope of possible claims by the addition of this phrase, and not narrow it.<sup>131</sup> This is consistent with the “victim-oriented” nature of the Liability Convention.<sup>132</sup>

**54.** In the present case, the link of traceability between Perovsk and the processing unit is clear. It exercises ownership and sole control over the equipment.<sup>133</sup> Further, Perovsk only State monetarily disadvantaged by the loss of functionality of the unit. Disallowing it from claiming under the Liability Convention would be against the intention of the drafters. Therefore, it must be allowed to claim under Article III.

#### **B. TITAN IS LIABLE UNDER ARTICLE III OF THE LIABILITY CONVENTION.**

**55.** Article III only imputes liability for accidents in outer space on the basis of “fault”.<sup>134</sup> Perovsk submits that *first*, fault is a breach of due diligence [I]; *second*, Titan’s conduct in

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<sup>129</sup> *Draft Report of the International Law Commission on the Work of its Sixty-Fifth Session*, A/CN.4/L.819/Add.1, 18 (2013).

<sup>130</sup> Comm. on the Peaceful Uses of Outer Space, Legal Subcomm., Rep. on its 7<sup>th</sup> Sess., 4<sup>th</sup> June-18<sup>th</sup> June 1968, Annex II, 19 U.N. Doc. A/AC.105/C.2/SR.101 (June 17, 1968)

<sup>131</sup> Julian Hermida, *International responsibility for space activities*, THE HAGUE, LONDON AND BOSTON: KLUWER ACADEMIC PUBLISHERS, 2004.

<sup>132</sup> *infra* at §51.

<sup>133</sup> *Compromis* §11.

<sup>134</sup> Article III, OST.



inspecting the processing station constitutes a breach of due diligence [II]; and *third*, Titan's breach is the proximate cause of the damage [III].

**I. Fault is a breach of due diligence.**

**56.** The term “fault” has not been defined under the Liability Convention. Its meaning must be ascertained through general International law.<sup>135</sup> Fault is interpreted as a negligent act in the circumstances,<sup>136</sup> an interpretation confirmed by the *travaux préparatoires*.<sup>137</sup> The failure to exercise due diligence constitutes negligence.<sup>138</sup> Due diligence is acting in a manner considered reasonable and prudent under the circumstances.<sup>139</sup> The standard for due diligence may be ascertained through prior obligations<sup>140</sup> or non-binding standards.<sup>141</sup>

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<sup>135</sup> Article III, OST; Carl Q. Christol, *The Legal Common Heritage of Mankind: Capturing an Illusive Concept and Applying it to the World Needs*, 18<sup>th</sup> I.I.S.L PROC. 48 (1976).

<sup>136</sup> HOWARD BAKER, *SPACE DEBRIS: LEGAL POLICY AND IMPLICATIONS* 84 (1989).

<sup>137</sup> Comm. on the Peaceful Uses of Outer Space, Legal Subcomm., Rep. on its 8<sup>th</sup> Sess., 9<sup>th</sup> June-4<sup>th</sup> July 1969, Annex II, 19 U.N. Doc. A/AC.105/58 (July 4, 1969); Comm. on the Peaceful Uses of Outer Space, Legal Subcomm., Rep. on the 2<sup>nd</sup> part of its 3<sup>rd</sup> Sess., 5<sup>th</sup> Oct-23<sup>rd</sup> Oct, 1964, Annex II, 20 U.N. Doc. A/AC.105/21 (May 21, 1965).

<sup>138</sup> Ram Jakhu, *Iridium-Cosmos Collision and its implications on Space Operation*, 52<sup>nd</sup> I.I.S.L PROC. (2009); Maria Flemme, *Due Diligence in International law*, 13 (2004).

<sup>139</sup> Paul G. Dembling, *Establishing Liability for Outer Space Activities*, 13 I.I.S.L PROC. 87, 88 (1970); Howard Baker, *Liability for Damage Caused in Outer Space by Space Refuse*, 13 ANNALS AIR & SPACE L. 183 (1988).

<sup>140</sup> *2<sup>nd</sup> Report*, ILA STUDY GROUP ON DUE DILIGENCE IN INTERNATIONAL LAW (2016); BIN CHENG, *GENERAL PRINCIPLES OF LAW AS APPLIED BY INTERNATIONAL COURTS AND TRIBUNALS*, 224 (1953).

<sup>141</sup> JAMES CRAWFORD, *BROWNIE'S PRINCIPLES OF PUBLIC INTERNATIONAL LAW*, 561 (2012); Lotta Viikari, *Environmental Aspects of Space Activities*, HANDBOOK OF SPACE LAW, 735 (2015).

**II. Titan's conduct in inspecting the processing station constitutes a breach of due diligence.**

57. Titan's lack of notification to Perovsk before inspecting the processing station amounts to a breach of due diligence.<sup>142</sup> Due diligence obligates a State to exercise reasonable preventive measures to minimize the potential harms to other States.<sup>143</sup> This obligation is customary International law.<sup>144</sup>

58. The extension of the principle of due diligence to outer space is essential,<sup>145</sup> given the ultra-hazardous nature of the activity.<sup>146</sup> Moreover, the OST has also recognized the applicability of general International law to outer space.<sup>147</sup> Thus, the duty to exercise due diligence in all activities extends to outer space.

59. Space activities are ultra-hazardous.<sup>148</sup> Therefore, the standard for meeting due diligence in the conduct of such activities is especially high.<sup>149</sup> Hence, any act of directing a rover specifically to another State's facilities with the particular intent of inspecting the same has the potential for harmful interference in that State's activities. This inherent safety threat posed by

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<sup>142</sup> Riccardo Pisillo-Mazzeschi, *Due Diligence Rule and the Nature of International Responsibility of States*, in STATE RESPONSIBILITY IN INTERNATIONAL LAW 113, 136 (Rene Provost ed., 2001); John Kelson, *State Responsibility for Abnormally Dangerous Activities* 13 HARV. INT'L L. J. 197, 238 (1972).

<sup>143</sup> HACKET, *supra* note 13 at 180; Stephen Gorove, *Liability in Space Law: An Overview*, 8 Annals. Air & Space. L. 376 (1983).

<sup>144</sup> Pulp Mills on the River Uruguay (Argentina v. Uruguay) (Judgment) 2010 I.C.J. 14, 55 (Apr. 20); Certain Activities Carried out by Nicaragua in the Border Area (Nicaragua v. Costa Rica) (Merits) 2015 I.C.J. 1, 45 (December, 16) [Border Area].

<sup>145</sup> Setsuo Aoki, *The Standard of Due Diligence in Operating a Space Object*, 55<sup>th</sup> I.I.S.L PROC. (2012).

<sup>146</sup> C.W. Jenks, *Liability for Ultra-hazardous Activities*, RECUEIL DES COURS 147 (1966).

<sup>147</sup> Article III, OST.

<sup>148</sup> Jenks, *supra* note 146, at 147.

<sup>149</sup> Pisillo-Mazzeschi, *supra* note 142 at 136; Kelson, *supra* note 142.

inspections was recognized unanimously in the LSC.<sup>150</sup> Notification prior to inspection was stipulated in the USSR draft in order to ensure the safest of environments. As the USSR representative pointed out, absolute freedom regarding the conditions of inspection was undesirable, because safety threats to personnel and processing stations had to be considered.<sup>151</sup>

60. As a spacefaring nation that was one of the first States to ratify the OST,<sup>152</sup> and has been conducting activities on the Moon since mid-1970s,<sup>153</sup> reasonable belief of this potential may be attributed to Titan. Hence, Titan has breached its obligation to exercise due diligence and has acted negligently.

### III. Titan's breach is the proximate cause of the damage.

61. The Liability Convention imputes liability on a State only if the resulting damage is “due to its fault”.<sup>154</sup> Thus, a State is liable for reparation only if the injury to the other State is *caused* by its actions.<sup>155</sup> This is confirmed by the *travaux préparatoires*.<sup>156</sup>

62. The test to determine causation is proximate causation.<sup>157</sup> This requires the satisfaction of two conditions.<sup>158</sup> *First*, the breach must be the *conditio sine qua non* of the damage [1];<sup>159</sup> and *second*, the damage must be a reasonably foreseeable result of the breach [2].<sup>160</sup>

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<sup>150</sup> Comm. on the Peaceful Uses of Outer Space, Legal Subcomm., Rep. on its 5<sup>th</sup> Sess., 63<sup>rd</sup> mtg., July 20, 1966, 5, U.N. Doc. A/AC.105/C.2/SR.63 (October 20, 1966); Comm. on the Peaceful Uses of Outer Space, Legal Subcomm., Rep. on its 5<sup>th</sup> Sess., 64<sup>th</sup> mtg., July 21, 1966, 8, U.N. Doc. A/AC.105/C.2/SR.64 (October 24, 1966); Rep. on its 5<sup>th</sup> Sess., *supra* note 88.

<sup>151</sup> Comm. on the Peaceful Uses of Outer Space, Legal Subcomm., Rep. on its 5<sup>th</sup> Sess., 63<sup>rd</sup> mtg., July 20, 1966, 5, U.N. Doc. A/AC.105/C.2/SR.63 (October 20, 1966).

<sup>152</sup> *Compromis* §2.

<sup>153</sup> *Compromis* §2.

<sup>154</sup> Article III, Liability Convention.

<sup>155</sup> H.L.A. HART & TONY HONORÉ, *CAUSATION IN THE LAW* (1985); Frans G. Von der Dunk, *Liability versus Responsibility in Space Law: Misconception or Misconstruction*, 34 I.I.S.L PROC. (1991); Alabama Claims, *supra* note 106.

<sup>156</sup> “Belgium: *Proposal Working paper on the unification of certain rules of liability for damages caused by space devices*” (1963) at U.N. Doc Annex II, 19 U.N. Doc A/AC/C.2/L.7 (1963).

**1. Titan's failure to exercise due diligence is the *conditio sine qua non* of damage.**

**63.** A *conditio sine qua non* refers to an event, *but for* which the damage would not have occurred.<sup>161</sup> As elaborated above, Titan's failure to notify and consult Perovsk before inspecting the processing station is a failure in exercising due diligence.<sup>162</sup> This failure is the *conditio sine qua non* of the damage.

**64.** Titan's lack of knowledge regarding the steepness of the lunar regolith,<sup>163</sup> near the processing station was a major contributor,<sup>164</sup> *but for* which, the accident would not have occurred. Titan's consultation with Perovsk regarding the inspection would have reasonably ensured Titan's cognizance of this steepness. This would have allowed Titan to make the necessary changes in the rover's path of approach. The changes would have ensured that even in the event of a communication failure rendering the rover inoperable, the unnatural steepness would not cause it to collide with the processing station. Hence, Titan's failure to hold appropriate consultations before the inspection is the *conditio sine qua non* of the damage.

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<sup>157</sup> War-Risk Insurance Premium Claims Arbitration, (United States v. Germany) 7 R.I.A.A. 44, 55 (1923); Bernhard Graefrath, *Responsibility and Damages Caused: Relationship between Responsibility and Damages*, 185 RECUEIL DES COURS 9 (1984).

<sup>158</sup> Article 31, *Commentary to ILC Draft Articles on Responsibility of States for Internationally Wrongful Acts*, 2(2) ILC Yearbook (2001) 31.

<sup>159</sup> RENÉ LEFEBER, *TRANSBOUNDARY ENVIRONMENTAL INTERFERENCE AND THE ORIGIN OF STATE LIABILITY*, 89 (1996); HART & HONORÉ, *supra* note 155.

<sup>160</sup> Special Rapporteur on State Responsibility, Second Report of the Special Rapporteur, 16-17, UN Doc. A/CN.4/425 & Corr.1 and Add.1 & Corr.1 (June 9, 22, 1989); Rep. of the International Law Commission, 58<sup>th</sup> session, May 1-June 9, July 3-August 11, 2006, 157 U.N.Doc. (A/56/10); GAOR, 61<sup>st</sup> Sess., Supp. No. 10 (2006); HART & HONORÉ, *supra* note 162, at 254-290.

<sup>161</sup> Glanville Williams, *Causation in Law*, 19 CAM. L. J 62, 63 (1961); 9 Application of the Convention on the Prevention and Punishment of the Crime of Genocide (Bosnia and Herzegovina v. Serbia and Montenegro), ICJ Reports (2007) §462.

<sup>162</sup> *infra* §63-66

<sup>163</sup> *Compromis* §20.

<sup>164</sup> *Compromis* §20.

## 2. The damage is a reasonably foreseeable result of the breach.

65. Proximate causation only requires the general class of harm to be foreseeable, not the clear prediction of specific harm.<sup>165</sup> Consequences are reasonably foreseeable if they are probable results of an act.<sup>166</sup> Titan has breached their obligation of conduct by not exercising due diligence in their targeted inspection.<sup>167</sup> The conclusion that a broad class of damage might result as a consequence of this failure is reasonably foreseeable.<sup>168</sup> Moreover, the risk of damage resulting from erroneous conduct, however slight, cannot be ignored.<sup>169</sup> Thus, Titan is not justified in ignoring the risk of damage resulting from its wrongful conduct. The consequence that damage could result from erroneous conduct is reasonably foreseeable.

66. The foreseeability of damage, in this case, is not affected by the “minor solar event”.<sup>170</sup> Intervening natural phenomenon must not mitigate the liability of States in outer space. All activities in outer space are, *a priori*, known to be susceptible to various natural phenomena.<sup>171</sup> Minor natural disturbances, although rare, are considered foreseeable.<sup>172</sup> Even in the Articles of State Responsibility, *force majeure* only precludes responsibility when the circumstance has

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<sup>165</sup> Luke Punnakanta, *Space Torts: Applying Nuisance and Negligence to Orbital Debris*, 86 SOUTHERN CALIFORNIA LAW REVIEW, 182, 183 (2012); RODA VERHEYEN, CLIMATE CHANGE DAMAGE AND INTERNATIONAL LAW: PREVENTION DUTIES AND STATE RESPONSIBILITY, 180 (2005).

<sup>166</sup> Naulilaa Arbitration, (Portugal v. Germany), 2 R.I.A.A. 1011, 1013 (1928); Dix Arbitration (United States v. Venezuela), 9 R.I.A.A. 119, 121 (1903).

<sup>167</sup> *infra* §63-66.

<sup>168</sup> Punnakanta, *supra* note 165.

<sup>169</sup> Wagon Mound (No.2), [1967] 1 AC 617; Samoan Claims (Germany, Great Britain, United States) IX R.I.A.A. 23 (12 October 1902).

<sup>170</sup> *Compromis* §20.

<sup>171</sup> JENKS, *supra* note 31; MCDUGAL, LASSWELL & VLASIO, LAW AND PUBLIC ORDER IN SPACE 615, 616 (1963).

<sup>172</sup> ANTONIO CASSESE, INTERNATIONAL LAW, 251 (2<sup>nd</sup> Ed. 2005); Christol, *supra* note 73, 365.

prevented a State from exercising its obligation.<sup>173</sup> Particularly, when a State has voluntarily acted in a wrongful manner, these disturbances are considered concurrent causes,<sup>174</sup> which do not mitigate its liability.<sup>175</sup>

**67.** It would be detrimental to the interests of the wronged State if the mere interference of foreseeable natural phenomena was enough to offset a claim for compensation. This would also go against the object and purpose of the Liability Convention as a “victim-oriented” treaty.<sup>176</sup> Hence, any damage in outer space must be considered reasonably foreseeable if it is proven that the risk of damage, however small, existed and is inherent in that particular wrongful action by the State.<sup>177</sup>

**68.** The *travaux préparatoires* supports this conclusion. The LSC agreed that the rarity of natural phenomena could not endanger a claim for compensation.<sup>178</sup> Damages from a satellite felled by lightning were deemed recoverable.<sup>179</sup> Thus, damage is considered foreseeable even if a low probability event materializes as such risks are inherent in space activities.<sup>180</sup>

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<sup>173</sup> Article 23, *Commentary to ILC Draft Articles on Responsibility of States for Internationally Wrongful Acts*, 2(2) ILC Yearbook (2001) 31 at 64.

<sup>174</sup> *id.*

<sup>175</sup> The ‘John’ (United States v. Great Britain), Commission under the Convention between the United States and Great Britain of February 8, 1853 (4 November 1864), reprinted in Article de la Pradelle and N. Politis, R.I.A.A., vol. 1 (1905), at 748.

<sup>176</sup> *Supra* note 132.

<sup>177</sup> Special Rapporteur on International Liability, *Third Report of the Special Rapporteur*, International Law Comm., 58, U.N. Doc DA/CN.4/360 (Jun.28, 1982) (by Robert Quentin-Baxter).

<sup>178</sup> Comm. on the Peaceful Uses of Outer Space, Legal Subcomm., Rep. on its 4<sup>th</sup> Sess., 50<sup>th</sup> mtg., September 28, 1965, 7, U.N. Doc. A/AC-105/C.2/SR.50 (Nov. 30, 1965).

<sup>179</sup> *id.*

<sup>180</sup> Rep. on its 4<sup>th</sup> Sess., *supra* note 190.

69. A collision is a reasonably foreseeable consequence of the rover's physical visit to the processing station. Titan has voluntarily breached its obligation to notify Perovsk,<sup>181</sup> which has precluded the parties from creating the safest environment possible for the inspection. The interference caused due to a foreseeable "minor solar event",<sup>182</sup> does not render the damage unforeseeable. The "minor solar event" is, at best, a concurrent cause,<sup>183</sup> and the presence of concurrent causes do not affect the amount of reparation owed by the liable State.<sup>184</sup>

70. Thus, Titan's unlawful act is the *conditio sine qua non* of the damage and the damage is a foreseeable consequence of the breach. Hence, Titan's actions are the proximate cause of the damage to the processing station. Therefore, Titan is liable under Article III of the Liability Convention.

**C. IN ANY CASE, TITAN IS LIABLE UNDER GENERAL INTERNATIONAL LAW.**

71. Perovsk is entitled to claim damages under general International law.<sup>185</sup> In the *Corfu Channel* case, the ICJ declared that a State is liable for damages when the breach of an international obligation is attributable to a State.<sup>186</sup> Further, there needs to be a causal link between the unlawful act and the harm suffered. Each of these applies to Titan, making it liable for the damage caused.<sup>187</sup>

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<sup>181</sup> *infra* §63-66.

<sup>182</sup> *Compromis* §20.

<sup>183</sup> Ilias Plakokefalos, *Causation in the Law of State Responsibility and the Problem of Overdetermination: In Search of Clarity*, EJIL (2015) 26(2): 471-492; Leon-Castallenos Jankiewicz, *Causation and International State Responsibility*, ACIL RESEARCH PAPER NO 2012-07 (2007).

<sup>184</sup> *id.*

<sup>185</sup> Article XXIII(1), Liability Convention.

<sup>186</sup> *Corfu*, *supra* note 80.

<sup>187</sup> *Factory at Chorzów (Germany v. Poland)*, 1928 P.C.I.J. (ser. A) No. 17 (Sept. 13).

72. Titan's failure to notify and consult before inspecting the processing station constitutes a breach of due diligence.<sup>188</sup> Moreover, the *Trail Smelter Arbitration*,<sup>189</sup> established that every State has a duty not to cause damage to the property of other States. The breach of this obligation is a wrongful act.<sup>190</sup> Thus, Titan's act of sending the damage-causing rover is attributable to it. There is a clear and causal link between the wrongful act and the damage. Therefore, Titan is liable under general International law.

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<sup>188</sup> *infra* §63-66.

<sup>189</sup> *Trail Smelter Arbitration* (United States v. Canada) 3 R.I.A.A. 1905 (1938).

<sup>190</sup> CHENG, *supra* note 140 at 436.



## SUBMISSIONS TO THE COURT

For the foregoing reasons, the Republic of Perovsk, the Applicant, respectfully requests the ICJ to adjudge and declare that:

1. Perovsk was under no obligation to notify or consult Titan about activities at the *Tekla Station*.
2. Under the principles of *ex aequo et bono*, Perovsk has the right to continue its activities on the Moon.
3. Titan violated International law by failing to disclose its discoveries on the Moon.
4. Titan is liable for the damage to Perovsk's property on the Moon.